EAST INDIA (COMMITTEE ON INDIAN EXCHANGE AND CURRENCY).

VOL. III.

APPENDICES

TO THE

REPORT

OF

THE COMMITTEE

APPOINTED BY THE SECRETARY OF STATE FOR INDIA TO ENQUIRE INTO INDIAN EXCHANGE AND CURRENCY.

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APPENDICES.

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APPENDIX I.

Statement of Case submitted by Mr. M. M. S. Gubbay, C.S.I., C.I.E., on behalf of the Government of India.

SUMMARY OF EVENTS SUBSEQUENT TO THE REPORT OF THE CHAMBERLAIN COMMISSION.

The following summary enumerates the main events subsequent to the Report of the Chamberlain Commission which have made it necessary to review fundamentally many of the assumptions upon which that Commission's conclusions were based, more particularly those which had reference to the stabilisation of the 1*s.* 4*d.* exchange and the maintenance of the rupee as a token coin.

2. It was not until the second year of the war that the probability of acute currency and exchange difficulties arising in India became apparent. Events had seemed to provide a practical test of the efficiency of a Gold Exchange Standard system in saving from depreciation in an international crisis the currency of a silver-using country; its efficiency in dealing with a situation in which that currency showed a tendency to appreciate beyond all previous conceptions had not been tested, nor had recent experience suggested that it would be so tested, or that the wind might blow from a quarter against which the Indian currency structure had never been buttressed. Up to then the problem set by the war had been the comparatively simple one of dealing with a temporary dislocation of trade and a temporary want of confidence resulting in a demand for facilities for the conversion of rupees into sterling and in a set-back in the circulation of currency notes. The usual machinery of the Gold Exchange Standard was brought into play and the situation was met without much difficulty, with the result that early in 1915, with a marked revival of business confidence, the return of money to the Savings Banks, an increase in the currency note circulation, and a firm demand for remittance to India in the shape of Council Bills, the Government of India could congratulate themselves that their currency system had proved itself efficient in practice. This improvement continued progressively during the financial year 1915–16; there was a strong internal demand for money to finance India's exports; the note issue showed a large increase; and there was a very heavy demand for remittance to India (Rs. 30,37 lakhs of Council Bills being sold during the year), the effect on the internal currency being a heavy absorption of rupees (nearly 10½ crores as against a net return of over 6½ crores during the previous year) and a record figure for the active note circulation.

3. By February 1916 it became apparent that the effect of the continued heavy balance of trade in favour of India, and of the prolongation of the war, would necessitate the early resumption of rupee coinage on a substantial scale. The continued absorption of rupees, the absence of the import of gold, which in former years had largely helped to liquidate the balance of trade and from which in certain parts of India the crops had previously been financed, and the large and growing military disbursements, all of which were disturbing the normal ebb and flow of currency, rendered it necessary to take steps to start the purchase of silver. Telegraphic correspondence on the subject thereupon began between the Secretary of State and the Government of India, the latter being from time to time obliged to increase their previous estimates of the amount of silver that it would be necessary to purchase.

4. By the summer of 1916 the advance in the price of silver had already reached a point when it became necessary to consider what steps should be taken, in the event of the price of the rupee *qua* silver exceeding its token value. At the same time, the absence of the usual seasonal return of rupees from circulation showed that it would be impossible to apply the criteria or formulæ evolved to regulate the purchase of silver in a period when the conditions of international trade were normal. There was still, however, no reason to apprehend any need to revise the basic conceptions of the Indian currency system. But in the autumn of that year events moved with great rapidity. The busy season of 1916–17 was no sooner in full swing than it became clear that the absorption of rupees was likely to be on an unprecedented scale. In November the Secretary of State was asked to accelerate the purchase and shipment of as much silver as he could get hold of. Meanwhile, special steps had already been taken to meet the heavy demand for remittance to India by increasing the fiduciary note issue against British Treasury Bills; by November and December 1916 this demand had become so intense that in order to enable the Indian Treasury to meet

Councils, two Ordinances had to be issued within a month of each other, authorising a further investment of the currency reserve of a total of 24 crores. Simultaneously, the stock of rupees in that reserve had fallen to under 15 crores by the early part of December, with the greater part of the busy season still to be faced, and the embarrassment which must follow from a large addition to the circulation without a corresponding metallic backing became obvious. It was clear that the pace was too hot to last, and that, if the convertibility of the note issue was to be maintained, a limit must be set to the facilities given by Government for the remittance of funds to India. Accordingly, on December 20th, 1916, a limit of 80 lakhs was placed on the weekly sales, which was raised the following week to 120 lakhs, at which figure it remained for some time.

5. The impossibility of selling unlimited Councils, together with the disappearance of the gold points, arising from the practical impossibility of shipping gold to India, at once created a set of conditions which were never in the perspective of the Chamberlain Commission. The large balance of trade in favour of India thus not being adjustable by the normal methods contemplated by the Commission, the rates of exchange threatened to break away and to rise to levels unprecedented since the standardisation of the exchange value of the rupee. Details of the events of January 1917 were given in the Financial Statement for 1917–18 and in the Currency Report for 1916–17; it is sufficient to mention here that a rate of 1*s.* 5*d.* was quoted and that at one time transactions were reported to have been put through at as high a rate as 1*s.* 6*d.* There was considerable apprehension as to the heights to which exchange might go if uncontrolled; and accordingly Government control was initiated which, with modifications, has continued up to the present.

6. Briefly stated, this control assumed the following form. Firms or Banks entitled to buy rupees from the Secretary of State were required to work at certain fixed rates (based on that of 1*s.* $4\frac{1}{4}$*d.* for immediate telegraphic transfers) at which exchange should be bought or sold. The Exchange Banks undertook to give preferential treatment to the finance of exports of war importance in order that the supply of these to the United Kingdom and the Allies should not be prejudiced by the failure to provide finance, a schedule of such articles being drawn up for their guidance. As a further inducement to the British Exchange Banks to co-operate in the financing of articles so scheduled, they received a guarantee from the Secretary of State covering risks of exchange. At the same time an appeal was made to merchants to effect solely through the Exchange Banks their purchases of sterling in order to ensure that the object of keeping exchange stable should not be defeated by outside transactions between importer and exporter and that the financing of war exports just referred to should have the first call upon all the funds sent home by remitters.

7. Meanwhile, the Government of India's currency difficulties steadily grew worse. The absorption of rupees during 1916–17 amounted to the altogether unprecendented figure of 33,81 lakhs and, as has been mentioned above, large purchases of silver had to be made—no less than £18 million worth being purchased during the year—the output of the Indian mints reaching the then record figure of 30 crores. Previous anticipations of the currency problems which it appeared likely that the Government of India might have to face had not seriously contemplated a situation in which the necessary amount of silver might be very difficult to obtain. Yet that situation had arrived. The world price of silver rose to phenomenal heights, and shattered the old fundamental assumption that the current coin of the country would, with a 1*s.* 4*d.* rate of exchange, remain a token coin. By August 1917 a point was reached at which the exchange value of the rupee was less than its silver content and there was a premium on its export; the control rate was therefore raised to 1*s.* 5*d.*, and the export of silver coin and bullion was prohibited.

Shortly before this, the import of gold had been prohibited except on condition of its tender to Government, and, concurrently with the raising of the exchange value of the rupee, a corresponding change was made in the price at which gold so tendered should be paid for, the object being to secure that neither premium nor discount should attach to remittances of gold as compared with Council remittances. No change was, however, made in the legal tender value of the sovereign, namely, Rs. 15.

8. Other remedial measures adopted during this period took the form of (*a*) the sale of gold bullion at the commencement of 1917 and (*b*) subsequently the release of sovereigns for the purchase of crops in certain areas. The latter measure was repeated in the following year supplemented by the issue of gold mohurs, coins specially struck

to meet a temporary depletion in the Indian holdings of coined gold. At the time when these issues of sovereigns were made in 1917, the sovereign stood at a small premium only and the effect of the issue was practically to break that premium for the time being; and if not a direct result thereof, it is at least an interesting coincidence that an exceptionally large return of rupees from circulation was experienced in the slack season, especially in those districts where sovereigns were issued. By 1918, however, the sovereign had reached a premium so high that it would have been impossible to break it without a practically unlimited issue, and, though advantage of the premium was indirectly obtained in the price at which it was possible to purchase wheat on behalf of the Royal Commission on Wheat Supplies, the issue of gold had no appreciable effect in reducing the demand for rupees. As a result of the premium, and in spite of a penal prohibition on the melting of coin, gold disappeared from circulation immediately on issue. It was consequently decided to discontinue the issue as being merely wasteful in the circumstances.

9. Currency difficulties in India reached a very critical stage in April 1918, when inconvertibility seemed imminent. Although this was staved off for the time being, it would undoubtedly have arrived within a few months but for the agreement with the United States Government for the release to India of a portion of the dollars in their currency reserve. The effect of that agreement, by which the minimum price of a dollar an ounce was fixed for silver, led to the further advance in exchange to 1*s.* 6*d.* in April 1918. Full particulars of the events just mentioned will be found in the Financial statement for 1919–20. On the removal, in May 1919, by the United States Government of the control imposed by them over silver during the war by the fixation of a maximum price and by imposing restrictions on its export, the price rose sharply to between 111 and 114 cents per ounce, the London quotation similarly rising to 58*d.* In consequence, the rate of exchange was further advanced to 1*s.* 8*d.* on the 13th May 1919.

10. The difficulty of obtaining adequate supplies of silver to meet the insistent demands for currency necessarily brought the Government of India face to face with the problem of the inconvertibility of their note issue. It is unnecessary to enlarge on this matter here as it was fully dealt with in Mr. Gubbay's memorandum* embodied in the Government of India's telegram, dated the 23rd January 1918. It is sufficient to say that by dint of various artificial aids, such as the withdrawal of extra-legal facilities for local encashment of currency notes, the prohibition of the export and import of coin and bullion and of the booking of coin by rail and steamer, and (as soon as victory in the war was assured) by successive turns of the screw in the matter of forcing the use of paper currency, the Government of India just managed to carry on, frequently in a hand to mouth sort of way, through the periods of pressure, on the one hand without an actual break-down or repudiation of their promise to encash their notes at the seven offices of issue, and on the other hand without actually having to unpeg exchange and allow it to find its natural level. But though during the last few months the situation as regards their rupee holdings has become much easier, the position is manifestly unstable. The artificial expedients just mentioned as well as those for the control of exchange referred to in paragraph 6 can obviously not be made an integral part of a permanent exchange and currency policy. Further, while the Pittman Act gave the Government of India some breathing space, this, unless the tide turns in the near future, may come to an end during the course of the next busy season.

Nature of the present Problem.

11. The above resumé brings out the problem which the Government of India have now to face, namely, how best to secure the greatest practicable stability of the rupee in terms of the sovereign. They wish to make it perfectly clear that they are wholly averse from any appearance of reverting to a silver standard and open mints, which they would regard as of the gravest danger to India's interests. Those who counsel such a course have forgotten the deplorable conditions of trade before the mints were closed, and also ignore such staggering facts as that the Home charges of the Government of India, which are Rs. 32 crores on a 1*s.* 4*d.* basis would rise to Rs. 52 crores with a 10*d.* rupee. The enormous advantages which have accrued to India under a policy of stable exchange are so well known as to call for no detailed elaboration in this connection; they were summarised in paragraphs 20–23 of a note of evidence submitted by Mr. H. F. Howard to the Chamberlain Commission (Appendix XXIII.), and later developments have reinforced the claim there advanced

* Evidence, p. 84.

in favour of the maintenance of a stable exchange. That the Government of India's views in the matter are shared by the commercial public in India has been amply demonstrated during the war by the apprehensions widely and repeatedly expressed by merchants whenever, as the result of a possible break-down of the facilities for remitting money backwards and forwards, exchange threatened to break away from a stable level. Government and commercial interests alike are in entire agreement as to the vital importance of maintaining stability. The inquiry is thus narrowed down to a consideration of the steps which are necessary and practicable to secure such stability.

12. One alternative which has been suggested is the debasement of the rupee, to such an extent as will ensure that the rupee shall remain a token coin, in this way preserving the essence of the gold exchange system. The Government of India's view is that any proposal for reducing the weight or fineness of the rupee must be dismissed as totally impracticable. They are equally opposed to the idea of having a baser metal token in place of a rupee, quite apart from the grave dangers of counterfeiting which such a measure would invite.

13. Another possibility would, to use the language of metaphor, be to attain stability by letting exchange be washed up by the tide of rising silver prices till it is flung above high water mark. Under this arrangement the rate of exchange would be raised with any appreciable rise in the price of silver, such variations being by steep stages, say, one penny, until a stage is ultimately reached at which there need be no fear of the exchange value of the rupee being less than its bullion value. This alternative represents the policy which was forced upon the Government of India during the war. As a result of this policy it has been necessary, even while this memorandum was under preparation, to make an increase in the rate of no less than twopence. Such a policy can only be justified as a make-shift solution. The period before absolute stability is reached might possibly be prolonged, and during that time there would be those continally recurring disturbances to trade and unsettlement of public confidence which attach to an open exchange and which are the very evils which it is essential to avoid. It is clear, moreover, that until the supply of silver had definitely and finally overtaken the demand, India would be at the mercy of the silver producers.

14. The third and only other alternative is to stabilise exchange at a rate which, regard being had to the probable future supplies and prices of silver, can be reasonably expected to afford an assurance that the rupee will remain a token coin. This is the policy which the Government of India favour, and, in order to make this assurance as complete as possible, they would be prepared to raise the gold value of the rupee to whatever point the Committee consider requisite for the purpose. They recognise that an abnormal rise in the price of silver due to circumstances which cannot now be foreseen might still upset the Committee's anticipations. A reasonably high rate, however, should be adequate against all ordinary fluctuations, especially if the Committee were to accept a suggestion, which has been put to the Government of India, that it should be buttressed by the gradual building up of the silver reserve as prices permitted of this. The Government of India do not of course conceive that the rate could be fixed at a point which in no circumstances could ever be topped; apart from the important considerations referred to in paragraph 17 below, this might involve the fixation of the rate at a level at which it would be impossible to maintain it by the ordinary method of selling sterling remittances in India. If this view be accepted, then the position will be that even with the fixation of what appears to be *primâ facie* an adequate rate, two lines of action must always be ready to prevent exchange from being again uprooted. In the first place, the Secretary of State would have to be prepared to sell Council Bills freely to prevent the rate from rising, and in the second place he would have also, in the last resort, to be prepared to suspend the purchase of silver, should it unexpectedly threaten to rise above whatever point is recommended by the Committee for the purpose of securing the necessary stability.

15. There is of course no disguising the fact that these two conditions, should they operate together—the stoppage of silver supplies and the demand for extra currency to meet heavy Council sales—might force the Government of India into a position of being unable to pay silver coin against currency notes tendered to them. There is no desire to minimise the consequences which would follow. They were vividly described, in their application to a time of war, in the memorandum* by Mr. Gubbay to which allusion has already been made. It is legitimate, however,

* Evidence, p. 84.

to draw a very marked distinction between inconvertibility, caused at a time of war by the total depletion of the Government's silver reserves, and suspension of specie payments caused by deliberate withdrawal from silver purchases as part of a definite policy designed to secure for India the undoubted advantages of a stable exchange and to protect it from the demands of silver producers. In the former case, inconvertibility, if it had come, would have been the consequence of the complete disappearance of the Government's silver resources as the result of heavy withdrawals, due largely to popular apprehensions as to the stability of the British Raj. In the latter case, the suspension of specie payments, should it come, would be the result of leaving the silver market at a time when Government might still hold not inconsiderable supplies of silver in their reserves. Furthermore, the suspension might be of brief duration, if India's abstention from silver purchases reacted on silver prices with the sharpness which we should expect. Nor should it be overlooked that very considerable progress has in the last year been made with the education of the Indian public in the use of notes for the financing of produce and, more particularly, in the use of small notes. The jute and cotton crops have been financed with notes, and a similar attempt is being made as regards this year's wheat crop. In brief, with the return of peace conditions the problem has materially changed.

16. It is not, the Government of India would repeat, without a full sense of the gravity of the consequences, that they contemplate inconvertibility as a possible, even if only a transient, feature of their future currency policy. They feel very strongly, however, that they ought not, in the interests of the people of India, to compete indefinitely with the silver producers and speculators of the world. There must be a limit to their responsibility for saturating India with silver at fanciful prices, whether those prices are the result of difficulties of production or of speculation or of heavy competitive demands from other parts of the world.

17. The precise rate of exchange to be fixed in permanency is not a matter on which the Government of India wish to dogmatize. They have recently inclined to the view that, for the immediate future, the choice lies between 1*s.* 6*d.* and 1*s.* 8*d.*, and that either of these rates might be announced and maintained until a permanent policy is adopted on the recommendations of the Committee. The recent removal of control over silver prices by the United States has settled the matter for the moment, and exchange has been raised to 1*s.* 8*d.* since May 13th. But the position, while this memorandum is being drafted, remains most artificial, since the London quotation of 58*d.* per ounce for standard silver represents a parity in the neighbourhood of 1*s.* 10*d.* As regards the rate to be ultimately recommended, the Committee will no doubt give due weight, apart from the all-important question of the future of silver, to the special consequences in India's case of raising the rate of exchange, namely, a recurring reduction in her Home charges and in the amount of capital expenditure incurred in the United Kingdom, accompanied by an initial capital loss on her sterling holdings. In determining the method of reaching the new rate, they would also have regard to the effects of a rising or falling exchange on the import and export trade of the country and on internal prices.

India's Absorption of the precious metals and other statistical information.

18. Attached to this memorandum are—

(A) a separate note asked for by the India Office on the spread of banking habits in India together with certain statistics bearing thereon and an annexure dealing with the indigenous banking system;

(B) three statements showing the absorption of (*i*) gold coin, (*ii*) rupees, (*iii*) the precious metals generally; and

(C) certain statistics of the coinage of rupees and purchases of silver.

It is unnecessary to discuss the contents of these statements in detail, but it is material to point out that, large as India's absorption of coin and bullion taken together has recently been, the figures of 1917–18 and 1918–19 have been previously exceeded. The figures suggest the inference that, great as has been the expansion in the note issue, and whatever future developments take place in the growth of banking or in the popularisation of notes, India will for a long time continue to consume large quantities of the precious metals, and that in so far as this demand cannot be satisfied by private imports, the result will be the melting down of the

metallic currency. From this point of view it would appear that the removal of prohibition on imports of silver must form part of any permanent policy, especially in view of the probable restrictions which may be expected to be placed by other countries in the next few years on India's power to acquire gold.

19. As regards the importation of gold into India, the Government of India are in entire agreement with the Secretary of State's telegram, dated the 2nd May 1919. It would be unthinkable to impose on India a disability in regard to realizing her foreign obligations in gold which would be special, and indeed unique, to that country. Moreover, from the purely financial point of view it is of the highest importance for the purpose of maintaining the parity between the rupee and the sovereign that the Government of India should have at their unfettered disposal a gold holding of real magnitude. It is for this reason that in a later paragraph the Government of India again insist on the importance of a substantial portion of the Gold Standard Reserve holding taking the form of gold.

In present circumstances it will probably be expedient for the Government of India to continue the control of imports of gold and to acquire these on Government account for the purposes of a central holding such as that recommended in the case of the United Kingdom by the recent Cunliffe Committee. Apart from the utilisation of gold for the purposes of international exchanges, there is the further question of the extent to and the manner in which the gold resources of the Government of India should be utilised for internal purposes. In the light of the experience referred to in paragraph 8, it is abundantly clear that it would be useless to attempt to maintain the convertibility of the note issue by the release of gold coin. There is already a very heavy premium on gold, and this would be further enhanced should the Committee recommend the adoption of a higher rate of exchange than that now ruling. With a population of over 300 millions, India's legitimate industrial consumption of gold must necessarily, in any circumstances, be substantial, and in certain circumstances it might conceivably be sound to release a certain amount of gold, other than coin, at the market rate. The ultimate course to be followed will, however, be conditioned by the general policy adopted under the Committee's recommendations and the course of subsequent events.

Ancillary Questions.

20. Apart from the main issues involved, it is necessary to refer to various recommendations made by the Chamberlain Commission on which no final decision was reached at the time. A review of these matters is inevitable because of the experience gained during the war of the difficulties which, whatever policy be adopted, may attend its practical application. In the light of that experience it would be surprising if some remodelling of the currency machinery were not required. Such questions relate to the sale of Councils and sterling drafts on London, and include the constitution and location of the Paper Currency and Gold Standard Reserves and various other matters.

21. As regards Councils, the policy of a stable exchange, as previously mentioned, connotes the free sale of Councils, to the extent of the trade demand for them; the rate not differing from the standard exchange figure by more than the limits represented in normal times by the gold points. The future in respect of the restoration of real gold points is obscure, and it may be necessary to fix some arbitrary rate in the neighbourhood of the standard rate at which Councils should be sold without limit of amount. The Committee will no doubt consider the upper limit to be adopted and the policy generally as regards the sale of Council bills at intervening points up to that limit.

22. Similar considerations apply to Reverse Councils. In their case the rate adopted should be a fixed rate representing a lower gold point (at present of course theoretical). The Government of India regard it as of great importance that at the rate so fixed Reverse Councils should be practically "on tap" and that at any time when a demand for them springs up there should be no delay in announcing their offer. This important matter has on various occasions formed the subject of communications between the Government of India and the Secretary of State. In view of the suddenness with which exchange conditions alter, experience has shown that if delay, with its inconvenience and uncertainty, as well as inflated tenders, are to be avoided, it is desirable that the Government of India should receive a general

authorisation from the Secretary of State to announce at any time and without further previous reference to him the sale of sterling drafts on a substantial scale, say to the extent of £1 million a week until further notice. On similar grounds it is of importance to include immediate transfers in the offer; this will relieve trade of any anxiety, while if bankers and others interested know that they can obtain "immediates" at any time, they will limit their applications to the amount absolutely required.

23. It will also be essential to review the recommendations previously made as to the location, constitution and functions of the Paper Currency and Gold Standard Reserves. With the free sale of Councils, the question arises as regards the Gold Standard Reserve whether the previous conception of its functions, namely, the maintenance of the external exchange value of the rupee, is not too limited. Similarly in the case of the Paper Currency Reserve it is necessary to consider how far, in order to admit of free sales of Councils through currency, it is legitimate to relax the restrictions previously considered desirable.

24. The main problems which arise with regard to the Paper Currency Reserve are of course the extent to which investment against the note issue is in normal circumstances legitimate and the form or forms which such investment should take. A memorandum on the subject of importing greater elasticity into the Reserve was recently prepared by Mr. H. F. Howard, C.S.I., C.I.E., for the consideration of the Government of India, and is attached to the statement as it will be of interest to the Committee. The whole question of the policy to be adopted in connection with this Reserve is, however, so bound up with the major problems which the Committee will have to consider that the decision of these important details must necessarily be dependent on the decisions upon the major issues. The Government of India trust that the Committee will be able to indicate the arrangements which they consider desirable with sufficient precision to make it possible to formulate the legislation necessary to give statutory effect thereto.

25. Mr. Howard's memorandum also deals with certain other questions arising out of the larger problems under consideration, the more important being those relating to the dimensions, constitution and functions of the Gold Standard Reserve. The Committee, in making their recommendations as to the actual size to be aimed at, will no doubt have regard to the standard rate of exchange which they recommend for adoption. As regards the constitution of the Reserve, the Government of India desire to reiterate the view which they have expressed on previous occasions that it is of the highest importance that a substantial portion of the Gold Standard Reserve should be held in the form of gold. Apart from this, they consider that here again and also in regard to the other subsidiary matters dealt with in the note, it would be premature for them to put forward any detailed recommendations pending settlement of the larger points of policy discussed in the earlier portion of this memorandum.

APPENDIX A.

Spread of Banking Habits in India.

In the following note an attempt is made to estimate the spread of banking habits in India in recent years. Such figures as are given have for the most part been taken from the "Statistical tables relating to banks in India" prepared by the Department of Statistics, which may be referred to for fuller details. Before examining the figures, it is desirable to mention two important qualifications which have to be borne in mind when drawing any deductions therefrom.

2. In the first place, it is important to remember that an increase in banking deposits, or in the number of cheques drawn on banks, does not necessarily indicate

anything like a corresponding increase in banking habits. Take, for example, the figures for the Clearing Houses at Calcutta, Bombay, Madras, Karachi and Rangoon. In 1913, the amount of the cheques cleared was 650 crores, in 1916 this had grown to 809 crores, in 1917 to 901 crores, and in 1918 to no less than 13,96 crores. In a country like India, it would be very dangerous to base on these figures any inference regarding the spread of banking habits. All that the figures indicate is that the turn-over of money in the five sea ports concerned has more than doubled in the last six years, and that this should be so is not surprising, for it is notorious that during the war, owing to the enormous disbursements by Government, the expansion of the currency note circulation, and the creation of credit (due in some measure perhaps to the war loan operations), the volume of money in the principal money markets has enormously increased. And not only has the volume of money increased, but also its velocity. Nothing is more remarkable during the past few years than the way in which the unprecedentedly large Government disbursements have returned to the banks in the principal money markets, there to be caught up again in the wheel of credit, thereby undoubtedly facilitating Government loan operations from a magnitude hitherto undreamt of in India, and the raising of large sums from Treasury Bills, and with the further consequence that the enormous seasonal fluctuations of money hitherto characteristic of the India money markets (money unobtainable at 9 per cent. or over in the busy season and unlendable at 3 per cent. in the slack season) have to a large extent been flattened out. This line of enquiry, however interesting, is scarcely relevant to the question how far the people at large, *i.e.*, outside the sea ports, have taken to habits of banking. This qualification must be borne in mind when considering, as will be done later, the growth of deposits, as a great deal of such growth must undoubtedly be due to the large volume of money in the principal money markets.

3. The second important qualification has reference to the phrase "banking habits," which, in its application to India, needs a little examination. In the ordinary use of the term one would measure the extent of the banking habit by the number of people who have banking accounts and who possess cheque books. To do so in the case of India would be seriously misleading, for in this country the use of a cheque book is by no means the sole index of the banking habit. In a separate note, printed as an annexure to this note, some account is given of the indigenous banking system in its relation to the Presidency Banks, and a brief description is given of the way in which Indian bankers, such as shroffs, mahajans and chetties, finance the internal trade of the country. It is quite impossible to estimate the amount of capital possessed by these people, but it must be very large, and, as is mentioned in that note, it is, generally speaking, only when their capital is already fully employed that shroffs, &c., come to the Presidency Banks for finance. Now the vast majority of shroffs, chetties, &c., besides using their personal capital, receive also deposits from the general public, the depositors being probably petty traders, zemindars, and other middle class people. Without a careful local enquiry at a number of centres throughout India, it would be quite impossible to estimate the amount of such deposits, but it is certain that in the aggregate they must represent a large amount of money. In practically no case, however, does such a depositor use a cheque book. He places his money with a shroff, usually for a certain fixed term, and receives a receipt, and at the end of the period he either renews his deposit or takes payment, together with interest, the rate which he receives being frequently 3 or 4 per cent. below the rate which the shroff is charging to his borrowers. To give any satisfactory answer to the question as to how far the people of India are banking their money, it would be necessary to find out to what extent the number of people, who habitually keep their spare money with a shroff or chetty, has increased, and, as has been said above, that would entail a prolonged enquiry, for it need hardly be said that none of these Indian bankers themselves publish any figures regarding their business; it would, indeed, probably be a very difficult matter to extract any accurate figures from them, as they would almost certainly believe that such figures would be used for the purpose of making income tax assessments. Generally speaking, however, it is believed that the volume of *hundi* transctions (*vide* the annexure to this note) is very considerable and probably far in excess of the volume of transactions by cheque.

4. Subject, then, to the above important qualifications, the facts which emerge from such figures as are available are as follows:—

(a) *The Presidency Banks.*—The private (*i.e.*, omitting Government) deposits of the three Presidency Banks have grown as follows :—

(Figures in lakhs.)

	Bank of Bengal.	Bank of Bombay.	Bank of Madras.	Total.
31st December 1880	5,02	2,65	80	8,47
" " 1890	6,66	6,19	1,90	14,75
" " 1900	5,82	4,33	2.73	12,88
" " 1910	16,09	10,58	5,67	32,34
" " 1913	18,25	10,18	8,06	36,49
" " 1917	29,41	28,18	10,20	67,79
" " 1918	24,49	17,50	9,54	51,53

(b) *The Exchange Banks.*—The Exchange Banks play a most important part in Indian trade, but their activities are confined almost entirely to the financing of foreign trade at the sea ports. Like other banks, the nine Exchange Banks receive deposits, and, since 1913, these have increased from 30 crores to about 53 crores; but such deposits are almost entirely collected at the sea ports—mainly at Calcutta and Bombay—and their growth is therefore not very material to the present enquiry.

(c) *Indian Joint Stock Banks.*—There are in existence 88 of these banks with 199 branches, many of which, however, are very small concerns, only 18 having a capital of 5 lakhs or over; many of the remainder are very small concerns of doubtful soundness, and every year sees the disappearance of several and the starting of a number of new ones. In the few years previous to 1913, there had been a remarkable expansion of joint-stock banking in Northern India, particularly in the Punjab, where, owing to the opening of the Canal Colonies and the growth of the export trade in wheat, there was a good deal of accumulated wealth. The most important of these banks was the People's Bank of India, with its headquarters at Lahore and with a number of branches throughout the Punjab and the western districts of the United Provinces. This Bank, with a paid-up capital of 12½ lakhs and deposits of 1¼ crores, went into liquidation in November 1913, and this was followed by the collapse of a number of other Indian managed banks in that province and in Bombay. Altogether, during 1913–14, 54 banks went into liquidation with a total paid-up capital of 144 lakhs. Since then, the annual liquidations (11 in 1915, 13 in 1916, and 9 in 1917) have been of small mushroom banks, and the larger Indian banks now in existence are probably sound and well managed. The failures of 1913–14 undoubtedly gave a considerable set-back to the spread of banking, especially in Northern India, where, previous to those failures, the banking habit appeared to have taken root. Since then, however, there has been a steady increase in the total deposits, as will be seen from the following figures :—

	Lakhs.
31st December 1880	63
" " 1890	2,71
" " 1900	8,07
" " 1912	27,26
" " 1913	24,10
" " 1914	18,37
" " 1915	18,88
" " 1916	25,72
" " 1917	32,16

Not all of these joint stock banks are Indian managed. The largest of them, namely, the Alliance Bank of Simla (which has absorbed several other banks) and the Allahabad Bank, are under European management, but the greater part of their operations are upcountry, and, subject to the qualifications mentioned earlier in this note, it may be said that the growth in the deposits of Indian joint stock banks affords some measure of such growth as there has been in the banking habit. It is unfortunate that statistics are not available to show the increase in the number of actual depositors.

5. Another criterion may be found in the growth of Government Savings Banks deposits, which are given in Statement I. appended to this note. It will be seen that, since 1900, the number of depositors has increased from 786,000 to 1,638,000 at the end of 1917–18, while the net deposits outstanding at the end of each year have increased from about $9\frac{1}{2}$ crores at the end of 1899–1900 to over $18\frac{3}{4}$ crores at the end of 1918–19. In April 1914 the outstanding deposits amounted to over 23 crores; the unsettlement due to the war resulted in fairly large withdrawals during 1914–15 and part of 1915–16, since when, however, there has been a steady recovery.

6. Mention may next be made of the growth of the investing habit, which is not without relevance to the present enquiry, for, as soon as a man begins to invest his savings, the time must eventually come when he will use a bank, provided of course (which is unfortunately very far from being the case in many parts of India) there is near to his door a bank which he will trust. The growth in the investment habit has been strikingly exemplified by the operations of the two Indian War Loans. In the First War Loan, the number of applications amounted to 159,932, although the greatest number in any previous loan had not exceeded 3,000. In the Second War Loan the number of investors was 231,302, although, no doubt, many of these had already invested in the previous year. Added to this, no fewer than 4,648,425 Cash Certificates were sold during the year 1917–18. It would, of course, be unsafe to make too large a deduction from these figures, as much of the investment in the War Loans was undoubtedly the result of an energetic propaganda and an appeal to the patriotism of investors. Nevertheless, it is probably not too much to hope that some, at any rate, of the new investors will be retained, and will acquire the habit of placing their savings in Government securities.

7. Finally, there is the co-operative movement, the progress of which under official guidance can be seen from the figures given in Statement II. Membership of a co-operative bank or similar society is not quite the same thing as having an individual banking account, but there is no doubt that this movement contains the germ of what may have a considerable effect upon the mental attitude of the people at large in the matter of keeping their savings elsewhere than in hoards. It will be seen from the statement that the growth in deposits in these co-operative societies has not kept pace with the growth in the number of members, the reason being that the movement as a whole has not yet recovered from the set-back which it experienced at the beginning of the war.

STATEMENT I.

Number of Depositors and amount of deposits in the Post Office Savings Banks, from 1899–1900 *to* 1917–18.

(Figures in thousands.)

	Number of Depositors.	Balance of deposits at end of year.	Average balance of deposits (inclusive of interest of each depositor).
		Rs.	Rs.
1899–1900	786	9,64,64	123
1900–01	816	10,04,33	123
1901–02	867	10,68,21	123
1902–03	922	11,42,15	124
1903–04	988	12,33,37	125
1904–05	1,059	13,40,70	127
1905–06	1,116	13,99,26	125
1906–07	1,190	14,76,70	124
1907–08	1,262	15,18,14	120
1908–09	1,319	15,23,42	116
1909–10	1,379	15,86,72	115
1910–11	1,430	16,91,88	118
1911–12	1,501	18,89,85	126
1912–13	1,567	20,61,14	132
1913–14	1,639	23,16,75	141
1914–15	1,644	14,89,26	91
1915–16	1,660	15,32,12	92
1916–17	1,647	16,59,53	101
1917–18	1,638	16,58,46	101
1918–19	—	18,80,19	—

STATEMENT II.

Growth of Co-operative Banks, &c.

(Rupees in thousands.)

—	Average for four years from 1906–10.	Average for four years from 1910–14.	1914–15.	1915–16.	1916–17.	1917–18.
Number of Societies of all kinds	1,926	10,400	17,327	19,675	23,036	26,465
Number of members - - -	161,910	488,401	787,661	865,053	960,960	1,055,244
Deposits from members - -	Rs. 14,12	Rs. 79,98	Rs. 1,21,46	Rs. 67,37	Rs. 79,01	Rs. 89,41

ANNEXURE TO APPENDIX A.

Connection between the Presidency Banks and the indigenous money markets.

The following note describes very briefly the way in which the Presidency Banks finance the internal trade of India through their purchases of internal bills of exchange, known generally as *hundis*. It must not be thought, however, that the financing by the Presidency Banks of internal trade and the assistance given by them to Indian financiers and merchants, is limited by the extent of their *hundi* business. A substantial portion of the cash credits given by the Presidency Banks represent advances made directly against produce, hypothecated to the Bank by Indian traders. Again, loans against Government and other approved securities are frequently made to Indian concerns. Figures regarding such business are, however, not readily obtainable, and the remarks in this note are therefore confined to the Banks' *hundi* business, which is where they impinge directly upon the bazaars. The following remarks refer primarily to the Bank of Bengal though the operations of the Bank of Bombay do not differ materially therefrom. In the case of the Bank of Madras its *hundi* rate is governed to a large extent by those of Bengal and Bombay.

2. The appended statements show the amount of *hundis* held by the Banks of Bengal, Bombay, and Madras at various dates during the past ten years and the changes in the Bank and *hundi* rates. Figures are also given which show how the Banks' *hundi* business compares with their total business. It will be seen that on some occasions over a third of the Banks' total advances have been represented by the purchase of *hundis*. Before dealing further with the statements a short and very generalised, and therefore not complete, account is first given of how the shroff system works in its relation to the Presidency Banks.

3. The people with whom the Bank deals directly are for the most part large shroffs of good standing in the principal cities. These men operate with their own capital and, generally speaking, it is only when they have laid out all their available capital in purchasing the *hundis* of other (and usually smaller) shroffs that they come to the Presidency Bank. The shroffs whose *hundis* the larger shroffs have purchased have probably also similarly financed other and still smaller shroffs or mahajans, and so on until we get down to the smallest flea of all, namely the village bania, or grain dealer or goldsmith. For instance, shroff A at Amritsar may purchase a bill drawn by a grain dealer upon a Bombay merchant. A may endorse the bill and sell it to B, a large shroff at Lahore, who sells it to the Presidency Bank, which sends it to their Bombay Agency for collection. Or the bill may be a pure finance bill (generally known as a "hand" bill, as opposed to a "trade" bill drawn against produce).

4. Speaking very generally, it may be said that the Bank's real security in the matter of purchasing or rediscounting bills is the personal standing of the drawee or endorser or accepter, and the Bank has an elaborate and very efficient system of limits, whereby the amount of bills discounted for each shroff is watched. Put very briefly, the system is as follows. Shroff A is given in the Bank's register a limit of, say, 20 lakhs, and at the same time the names of the drawers of the bills purchased from him by the Bank are watched. The Bank may have purchased from A, say, 15 lakhs of bills, the drawers of which are B, C, D, E, etc. If it is observed that shroff A has been purchasing rather too many bills from shroff D, who is of comparatively small standing, or about whom not much is known, A will be liable to be turned down, or, if the fact has been noticed by the Head Office, the Branch will at once be told to go slow.

5. As already mentioned, *hundis* are of two kinds—pure finance bills, known as hand bills, and trade bills. The Bank are much more particular as to the amount of the former that they discount for a shroff than the latter. This is not because they receive any documents on account of trade bills (their direct security is just as personal as in the case of hand bills), but because they know that, somewhere or other, produce or goods exist against the credit so created, that such goods must have been hypothecated to one or other of the shroffs whose names are on the bill, and that, if anything goes wrong, such shroff will be able to realise on the goods and so to reimburse the subsequent holders of the bill, to whom he is liable. In the case of hand bills, on the other hand, it is impossible to say definitely how far these represent a genuine trade demand or not.

6. Turning to the appended statements, it may be said broadly that the *hundi* rate rises and falls with the bank rate proper, though somewhat in advance of it, and naturally so, for one is a discount rate and the other a rate for day-to-day loans. Thus, at the beginning of the busy season, the *hundi* rate would usually be higher than the bank rate; the reverse being the case when the slack season is about to begin, so that the *hundi* rate may be said to be a sort of long-distance signal. When the Bank finds that it is not getting enough *hundis* and its money is lying unemployed, it puts down the *hundi* rate; when, on the other hand, it feels that it has already got too much money in the bazaar, or, for some reason or other, wishes to consolidate and conserve its resources, it puts up the *hundi* rate, and may even go to the length of refusing to buy new *hundis*. No cases have come to official notice of a Presidency Bank making a wholesale refusal to *renew* hundis, although it may charge a rate considerably higher than that at which the original *hundi* was discounted. On special occasions, when the Bank is very hard pressed for money, it may impose a prohibitive rate on the bazaar, so as to force shroffs to endeavour to raise money elsewhere rather than to renew their hundis with the Bank. The attached statements show one occasion on which this was done, *viz.*, in December 1916, when the Bank of Bengal imposed a hundi rate of 10 per cent. although the bank rate was only 8 per cent. This, it will be remembered, was at a time when a very large number of special Councils were being sold, and when there was very great pressure to finance the export trade, while Government itself was hard pressed for funds.

BANK OF BENGAL.

Statement showing Bills discounted, Total Advances, and Average Bank Rate for each Half Year.

(Rupees in Lakhs.)

Date.		Bills.	Total Advances.	Average Bank Rate for Half Year.
		Rs.	Rs.	
1909	30th June	2,36·18	10,55·35	6·580
	31st December	2,93·98	12,43·40	3·907
1910	30th June	2,58·43	9,97·44	6·143
	31st December	3,00·02	12,81·24	4·510
1911	30th June	2,60·10	10,36·50	6·657
	31st December	3,96·60	12,51·12	4·358
1912	30th June	2,88·97	10,85·02	6·242
	31st December	3,91·62	13,34·30	4·592
1913	30th June	3,31·60	11,01·41	6·569
	31st December	2,86·82	13,52·24	5·331
1914	30th June	2,44·64	10,63·00	5·939
	31st December	1,96·41	10,35·05	4·961
1915	30th June	2,04·26	9,33·82	5·839
	31st December	2,59·33	10,33·79	5·543
1916	30th June	2,24·46	10,67·78	7·252
	31st December	3,16·58	12,36·62	6·321
1917	30th June	1,79·32	14,02·28	6·690
	31st December	5,00·29	14,49·38	5·364
1918	30th June	2,55·41	14,66·79	5·773
	31st December	2,00·17	16,93·87	5·298

BANK OF BENGAL.

Variations in Bank Rate and Hundi Rate with Amount of Bills discounted when Bank Rate was changed.

(Rupees in lakhs.)

Date.	Bank Rate.	Hundi Rate.	Bills Discounted.
1909.			Rs.
14th January	7	—	2,72·44
28th January	8	—	2,93·23
18th March	7	—	2,70·15
29th April	6	—	2,67·37
27th May	5	—	2,87·62
17th June	4	4	2,39·03
1st July	3	—	2,35·69
23rd September	—	4½	—
30th September	4	5	2,68·22
11th November	5	5½	2,83·73
18th November	—	6	—
9th December	6	7	2,99·25
23rd December	—	7½	—
1910.			
13th January	—	7½	—
3rd March	7	—	3,02·46
10th March	—	8	—
21st April	—	6	—
12th May	6	5½	3,29·04
2nd June	5	—	3,13·16
9th June	—	4	—
16th June	4	—	2,94·68
30th June	—	3	—
1st July	3	—	2,48·86
25th August	—	3½ to 4	—
20th September	—	5	—
22nd September	4	—	3,57·23
6th October	5	—	3,89·05
3rd November	6	6½	3,67·12
10th November	—	7	—
22nd November	—	7½	—
1st December	7	—	3,24·67
29th December	—	8	—
1911.			
23rd February	8	—	3,24·66
30th March	7	7	3,10·38
6th April	—	6 to 6½	—
11th May	6	5½	2,99·05
25th May	—	5	—
1st June	5	—	2,95·31
15th June	4	—	2,66·95
21st June	—	3½	—
3rd August	3	—	2,65·23
1st September	4	—	2,95·11
28th September	5	—	3,76·67
28th December	—	5	—
1912.			
4th January	—	5 to 5½	—
11th January	6	6½	3,75·30
16th January	—	7	—
18th January	7	8	3,96·63
26th January	8	—	4,22·47
8th February	—	7	—
7th March	7	6½	3,23·86
21st March	6	6	2,76·82
16th May	—	4½	—
23rd May	5	4½	3,38·79
30th May	—	4	—
1912—*cont.*			
20th June	4	3½	2,95·88
11th July	3	—	2,77·47
22nd August	—	4	—
12th September	4	—	3,40·79
26th September	—	4½	—
2nd October	—	5	—
3rd October	5	—	3,50·74
7th November	—	5½	—
14th November	6	6	3,66·12
28th November	7	—	3,88·82
19th December	—	7½	—
1913.			
2nd January	—	8	—
9th January	8	—	3,81·10
6th February	—	7	—
13th February	7	—	3,36·42
6th March	—	8½	—
3rd April	—	7	—
10th April	—	6½	—
17th April	6	6	3,35·56
29th May	—	5	—
5th June	5	4½	3,83·91
12th June	—	4	—
19th June	4	3½	3,69·24
3rd July	3	—	3,21·85
24th July	—	4	—
31st July	—	4½	—
7th August	4	—	3,61·54
14th August	—	5	—
21st August	—	5½	—
28th August	5	—	4,39·24
4th September	—	6	—
11th September	—	6½	—
18th September	6	7	4,04·85
25th September	—	7½	—
13th November	7	—	4,04·81
1914.			
8th January	—	7	—
5th February	—	6	—
13th March	—	5½	—
19th March	6	5½	3,08·06
23rd April	—	5	—
1st May	5	—	2,73·98
21st May	—	4½	—
4th June	4	4 to 3½	2,70·42
18th June	—	3½ to 4	—
9th July	3	—	2,29·29
6th August	5	6	2,16·51
5th November	6	7	1,89·67
1915.			
7th January	—	6	—
18th March	—	5	—
27th May	—	4	—
2nd June	5	—	2,10·57
23rd September	6	5	2,21·81
16th December	—	5½	—
23rd December	—	6	—
29th December	—	6½	—

BANK OF BENGAL—*continued.*

(Rupees in lakhs.)

Date.	Bank Rate.	Hundi Rate.	Bills Discounted.	Date.	Bank Rate.	Hundi Rate.	Bills Discounted.
1916.			Rs.	1917.			Rs.
1st January -	7	—	2,48·02	11th January -	—	8	—
5th January -	—	7	—	1st February -	—	7½	—
6th January -	—	7½	—	19th February -	—	7	—
13th January -	—	8	—	22nd February -	7	6½	2,63·16
18th January -	—	9	—	15th March -	6	5½	2,68·01
20th January -	8	—	2,99·46	10th April - -	—	6	—
23rd January -	—	8	—	17th April - -	—	7	—
28th March -	—	7	—	26th April - -	—	7½	—
30th March -	—	7	—	10th May - -	—	8	—
14th April - -	7	—	2,19·75	19th July - -	—	7	—
23rd May - -	—	6	—	2nd August -	—	6	—
1st June - -	6	5	2,66·95	16th August -	—	5	—
15th May - -	—	4½	—	23rd August -	—	4½	—
22nd June - -	5	4	2,43·41	30th August -	—	4	—
13th July - -	—	3½	—	6th September -	5	—	1,26·47
20th July - -	—	4	—	22nd November -	—	4½	—
3rd August -	—	4½	—	27th November -	—	5	—
7th September -	—	5	—	5th December -	—	5½	—
14th September -	6	—	2,87·47				
12th October -	7	6	2,96·42	1918.			
2nd November -	—	6½	—				
9th November -	8	7	2,79·80	3rd January -	6	6	4,89·51
30th November -	—	7½	—	22nd January -	—	6½	—
7th December -	—	8	—	5th February -	—	7	—
18th December -	—	10	—	11th April - -	—	7½	—
				14th May - -	—	6	—
				23rd May - -	5	5	4,45·36
				1st August - -	—	6	—
				26th September -	—	6½	—
				7th November -	6	—	2,21·74

BANK OF BOMBAY.

(Rupees in lakhs.)

Date.		Bills Discounted.	Advances.	Total.
		Rs.	Rs.	Rs.
1909	30th June - - - - -	1,53·97	5,59·46	7,23·43
	31st December - - - - -	2,66·54	5,13·93	7,80·47
1910	30th June - - - - -	1,56·37	6,46·36	8,02·73
	31st December - - - - -	2,02·94	6,19·79	8,22·73
1911	30th June - - - - -	1,08·75	6,75·58	7,84·33
	31st December - - - - -	2,66·96	4,66·35	7,33·31
1912	30th June - - - - -	1,84·47	4,50·35	6,34·82
	31st December - - - - -	3,14·65	6,01·65	9,16·30
1913	30th June - - - - -	2,16·29	5,80·84	7,97·13
	31st December - - - - -	1,59·29	5,51·20	7,10·49
1914	30th June - - - - -	1,59·17	5,42·42	7,01·59
	31st December - - - - -	61·29	5,61·00	6,22·29
1915	30th June - - - - -	98·16	5,18·15	6,16·31
	31st December - - - - -	1,14·14	5,96·19	7,10·33
1916	30th June - - - - -	98·26	6,13·75	7,12·01
	31st December - - - - -	1,13·05	5,99·77	7,12·82
1917	30th June - - - - -	1,44·23	9,82·14	11,26·37
	31st December - - - - -	1,78·56	9,24·04	11,02·60
1918	30th June - - - - -	89·22	8,87·46	9,76·68
	31st December - - - - -	29·69	11,93·09	12,22·78

BANK OF BOMBAY.

(Rupees in lakhs.)

Date.	Bank Rate.	Hundi Rate.	Bills Discounted.
			Rs.
1909.			
6th January	6	7	1,67·86
15th January	7	7½	1,83·70
19th January	—	8	1,88·59
19th March	—	7	1,75·13
14th May	6	6	1,87·98
3rd June	5	5	1,62·79
26th June	4	4	1,50·11
15th July	3	3½	1,47·20
4th August	—	3	1,31·15
9th September	—	3½	1,23·78
15th September	—	4	1,26·86
5th November	4	5	1,59·56
13th November	—	6	2,13·73
18th November	5	—	—
25th November	6	—	—
26th November	—	6½	2,42·05
15th December	6	7	2,61·37
1910.			
3rd March	7	8	2,27·93
29th March	—	7	2,02·76
19th April	—	6	1,94·43
26th May	6	5	2,10·51
14th June	5	4	1,75·93
27th June	4	3½	1,60·06
8th July	3	3	1,57·15
15th September	—	3½	1,75·73
20th September	—	4	1,78·27
3rd October	—	4½	1,93·31
6th October	4	5	1,95·29
25th October	—	6	1,81·43
5th November	5	6½	1,94·95
17th November	6	7	1,87·37
15th December	7	7½	1,81·53
28th December	7	8	2,00·82
1911.			
20th March	—	7	1,97·03
1st April	—	6	1,92·47
20th May	6	5½	1,86·12
29th May	—	5	1,79·19
15th June	5	4	1,50·23
27th June	4	3½	1,23·24
30th June	—	3	1,08·75
19th October	—	4	2,02·94
1st December	—	4½	2,52·85
19th December	—	5	2,53·38
1912.			
3rd January	5	6	2,66·96
11th January	6	7	2,84·67
27th January	7	8	3,13·82
8th February	8	7½	3,13·23
10th February	—	7	3,07·76
7th March	7	6½	2,68·85
20th March	6	6	2,35·36
13th May	5	5½	2,19·83
16th May	—	5	2,19·83
25th May	—	4	1,99·52
21st June	4	3½	1,96·14
1st July	—	3	1,84·47
12th August	3	3½	1,79·81
18th September	—	4	1,60·40
3rd October	4	4½	1,58·25
31st October	—	5	1,75·82
13th November	—	5½	1,90·50
14th November	5	—	—
28th November	6	6	2,36·82
3rd December	—	6½	2,49·64
10th December	6	7	2,73·66
16th December	7	7½	2,90·28
18th December	—	8	2,90·28
27th December	8	9	3,10·85
1913.			
24th January	—	8	2,61·04
22nd February	—	8½	2,52·34
4th March	—	9	2,60·74
26th March	—	8½	2,37·36
29th March	—	8	2,28·35
4th April	7	7	2,38·70
26th April	—	7½	2,89·36
28th April	—	8	2,89·36
21st May	—	7½	2,62·37
22nd May	—	7	2,62·37
26th May	—	6	2,52·03
4th June	6	5	2,46·71
18th June	5	4	2,07·00
14th July	4	3½	2,22·04
24th July	3	4	2,32·57
2nd August	—	4½	2,41·15
8th August	4	5	2,41·15
9th September	—	5½	2,14·67
16th September	5	6	2,15·96
26th September	—	6½	2,24·82
7th October	—	7	2,42·19
24th October	6	6½	2,35·04
31st October	5	6	2,26·00
29th December	—	6½	1,54·71
1914.			
15th January	6	7	1,60·32
10th February	—	6½	—
11th February	—	—	1,89·48
14th February	—	6	1,89·26
24th April	—	5	2,12·64
21st May	5	4½	2,03·99
2nd June	—	4	1,95·41
4th June	4	—	—
25th June	3	3½	1,69·43
3rd August	—	4	1,09·76
4th August	—	5	1,09·76
6th August	4	6	1,09·76
13th August	5	—	—
20th August	6	7	1,08·22
1915.			
12th January	—	6	63·21
22nd March	—	5	1,07·76
21st April	—	5½	1,28·39
7th May	—	5	1,34·18
28th May	—	4½	1,25·91
4th June	5	4	1,16·04
24th June	—	3½	1,10·25
10th July	—	3	98·50
16th August	—	3½	98·50
22nd September	—	4	75·39
5th October	—	5	87·81
4th November	6	—	—

BANK OF BOMBAY—*continued.*

(Rupees in lakhs.)

Date.	Bank Rate.	Hundi Rate.	Bills Discounted.	Date.	Bank Rate.	Hundi Rate.	Bills Discounted.
1915—*cont.*			Rs.	1917.			Rs.
7th December -	—	5½	1,01·51	6th January -	—	9	99·37
13th December -	—	6	1,07·11	9th January -	—	8	99·37
22nd December -	—	7	1,12·49	15th February -	—	7½	1,70·56
				16th February -	—	7	1,70·56
				19th March -	6	6½	1,87·73
				5th April - -	—	7	2,28·11
1916				10th April - -	—	7½	2,22·11
				16th April - -	—	8	2,28·68
3rd January -	—	8	1,14·14	16th May - -	—	7	2,02·38
6th January -	7	—	—	29th May - -	—	6	1,68·92
13th January -	8	9	1,19·14	5th June - -	6	7	1,58·60
27th January -	—	8	1,10·51	9th June - -	—	8	1,71·92
9th February -	—	9	1,14·05	17th July - -	—	7	1,17·26
21st February -	—	9½	1,21·93	30th July - -	—	6	98·84
14th March -	—	9	95·13	15th August -	—	5	66·50
27th March -	—	8	90·05	20th August -	—	4½	60·37
20th April - -	7	7	1,05·60	23rd August -	5	4	60·37
1st May - -	—	7½	1,23·71	19th November -	—	5	1,43·96
2nd May - -	—	8	1,23·71	29th November -	—	6	1,70·29
19th May - -	—	7	1,25·08	3rd December -	—	6½	1,68·08
22nd May - -	—	6	1,22·26				
1st June - -	5	5	1,28·84	1918.			
13th June - -	—	4½	1,26·68				
19th June - -	5	4	1,16·26	28th January -	6	7	1,29·91
14th July - -	4	3½	84·63	4th February -	—	7½	1,35·41
17th August -	5	—	—	9th April - -	—	8	1,18·81
14th September -	5	4	1,82·66	25th April - -	—	7½	1,26·66
2nd October -	—	4½	1,89·92	30th April - -	—	7	1,23·26
7th October -	6	5	1,86·85	9th May - -	—	6½	1,08·59
13th October -	—	5½	1,86·85	15th May - -	—	6	1,10·84
31st October -	—	6	1,57·41	24th May - -	5	5½	96·77
20th November -	—	7	1,52·25	30th May - -	—	5	82·00
25th November -	7	8	1,42·99	21st September -	—	5½	73·23
28th November -	—	9	1,42·99	26th September -	—	6	73·23
30th November -	8	—	—	30th October -	—	6½	66·98
16th December -	—	10	1,31·96	7th November -	6	7	60·99
				28th December -	—	7½	30·16

BANK OF MADRAS.

Date.		Bills Discounted.	Total Trade Advances.
		Rs.	Rs.
1909	June - - - - - -	85,12,000	3,99,16,000
	December - - - - - -	1,22,25,000	4,08,28,000
1910	June - - - - - -	86,84,000	4,55,44,000
	December - - - - - -	1,26,70,000	4,59,76,000
1911	June - - - - - -	87,35,000	4,73,44,000
	December - - - - - -	1,25,33,000	5,09,85,000
1912	June - - - - - -	1,08,64,000	5,74,83,000
	December - - - - - -	1,82,37,000	6,34,57,000
1913	June - - - - - -	1,52,11,000	7,32,58,000
	December - - - - - -	1,67,41,000	6,90,15,000
1914	June - - - - - -	1,44,60,000	7,52,50,000
	December - - - - - -	81,20,000	5,77,48,000
1915	June - - - - - -	82,60,000	5,64,12,000
	December - - - - - -	88,58,000	5,74,83,000
1916	June - - - - - -	82,10,000	7,09,96,000
	December - - - - - -	1,00,62,000	6,80,87,000
1917	June - - - - - -	78,60,000	7,13,70,000
	December - - - - - -	1,37,16,000	6,13,24,000
1918	June - - - - - -	1,34,59,000	7,69,91,000
	December - - - - - -	66,16,000	6,94,12,000

APPENDIX B.

I.—*Statement showing absorption of gold coin quarterly and annually from 1st April 1908 to 31st March 1917 (figures in thousands of £) vide paragraph 18 of Memorandum.*

1908–9.

	1st Quarter.	2nd Quarter.	3rd Quarter.	4th Quarter.	For Year.
Opening Balance—					
Currency	2,688	1,252	432	123	2,688
Treasuries	209	198	124	74	209
Total	2,897	1,450	556	197	2,897
Add—Imports tendered to Government	15	30	—	30	75
Deduct—Exports	2	196	240	16	454
Total	2,910	1,284	316	211	2,518
Closing Balance—					
Currency	1,252	432	123	23	23
Treasuries	198	124	74	63	63
Total	1,450	556	197	86	86
Absorption after passing through Government treasuries and currency offices.	1,460	728	119	125	2,432
Add—Imports on private account not tendered to Government but absorbed direct.	—	—	—	—	*1,004
TOTAL ABSORPTION	1,460	728	119	125	3,436

1909–10.

Opening Balance—					
Currency	23	11	20	1,777	23
Treasuries	63	60	23	86	63
Total	86	71	43	1,863	86
Add—Imports tendered to Government	—	—	1,946	5,193	7,139
Deduct—Exports	2	25	—	1	28
Total	84	46	1,989	7,055	7,197
Closing Balance—					
Currency	11	20	1,777	6,202	6,202
Treasuries	60	23	86	223	223
Total	71	43	1,863	6,425	6,425
Absorption after passing through Government treasuries and currency offices.	13	3	126	630	772
Add—Imports on private account not tendered to Government but absorbed direct.	333	455	1,248	66	2,102
TOTAL ABSORPTION	346	458	1,374	696	2,874

* Details by quarters are not at present available.

APPENDIX B.—*continued.*

1910–11.

——	1st Quarter.	2nd Quarter.	3rd Quarter.	4th Quarter.	For Year.
Opening Balance—					
Currency	6,202	4,288	2,546	2,402	6,202
Treasuries	223	250	242	231	223
Total	6,425	4,538	2,788	2,633	6,425
Add—Imports tendered to Government	282	8	1,982	5,354	7,626
Deduct—Exports	315	52	3	10	380
Total	6,392	4,494	4,767	7,977	13,671
Closing Balance—					
Currency	4,288	2,546	2,402	6,186	6,186
Treasuries	250	242	231	298	298
Total	4,538	2,788	2,633	6,484	6,484
Absorption after passing through Government treasuries and currency offices.	1,854	1,706	2,134	1,493	7,187
Add—Imports not tendered to Government but absorbed direct.	144	142	325	303	914
TOTAL ABSORPTION	1,998	1,848	2,459	1,796	8,101

1911–12.

Opening Balance—					
Currency	6,186	6,202	6,210	8,382	6,186
Treasuries	298	354	321	328	298
Total	6,484	6,556	6,531	8,710	6,484
Add—Imports tendered to Government	2,050	1,066	4,011	9,926	17,053
Deduct—Exports	22	82	2	3	109
Total	8,512	7,540	10,540	18,633	23,428
Closing Balance—					
Currency	6,202	6,210	8,382	15,554	15,554
Treasuries	354	321	328	274	274
Total	6,556	6,531	8,710	15,828	15,828
Absorption after passing through Government treasuries and currency offices.	1,956	1,009	1,830	2,805	7,600
Add—Imports not tendered to Government but absorbed direct.	161	228	532	368	1,289
TOTAL ABSORPTION	2,117	1,237	2,362	3,173	8,889

APPENDIX B.—*continued.*

1912-13.

——	1st Quarter.	2nd Quarter.	3rd Quarter.	4th Quarter.	For Year.
Opening Balance—					
Currency	15,554	17,385	19,782	17,796	15,554
Treasuries	274	417	291	402	274
Total	15,828	17,802	20,073	18,198	15,828
Add—Imports tendered to Government	5,259	3,160	3,419	5,101	16,939
Deduct—Exports	27	78	1,987	467	2,559
Total	21,060	20,884	21,505	22,832	30,208
Closing Balance—					
Currency	17,385	19,782	17,796	19,583	19,583
Treasuries	417	291	402	380	380
Total	17,802	20,073	18,198	19,963	19,963
Absorption after passing through Government treasuries and currency offices.	3,258	811	3,307	2,869	10,245
Add—Imports not tendered to Government but absorbed direct.	—14	563	6	301	856
TOTAL ABSORPTION	3,244	1,374	3,313	3,170	11,101

1913-14.

Opening Balance—					
Currency	19,583	17,243	16,676	15,172	19,583
Treasuries	380	532	355	395	380
Gold Standard Reserve	—	—	—	1,475	—
Total	19,963	17,775	17,031	17,042	19,963
Add—Imports tendered to Government	2,061	251	2,638	2 321	271
Deduct—Exports	356	562	17	7	942
Total	21,668	17,464	19,652	19,356	26,292
Closing Balance—					
Currency	17,243	16,676	15,172	14,957	14,957
Treasuries	532	355	395	492	492
Gold Standard Reserve	—	—	1,475	—	—
Total	17,775	17,031	17,042	15,449	15,449
Absorption after passing through Government treasuries and currency offices.	3,893	433	2,610	3,907	10,843
Add—Imports not tendered to Government but absorbed direct.	272	170	382	407	1,231
TOTAL ABSORPTION	4,165	603	2,992	4,314	12,074

APPENDIX B.—*continued.*

1914–15.

	1st Quarter.	2nd Quarter.	3rd Quarter.	4th Quarter.	For Year.
Opening Balance—					
Currency	14,957	12,003	2,616	6,207	14,957
Treasuries	492	598	121	48	492
Gold Standard Reserve	—	—	7,809	3,887	—
Total	15,449	12,601	10,546	10,142	15,449
Add—Imports tendered to Government	838	47	—	50	935
Deduct—Exports	255	481	253	19	1,008
Total	16,032	12,167	10,293	10,173	15,376
Closing Balance—					
Currency	12,003	2,616	6,207	5,097	5,097
Treasuries	598	121	48	51	51
Gold Standard Reserve	—	7,809	3,887	5,238	5,238
Total	12,601	10,546	10,142	10,386	10,386
Absorption after passing through Government treasuries and currency offices.	3,431	1,621	151	—213	4,990
Add—Imports not tendered to Government but absorbed direct.	73	201	114	244	632
TOTAL ABSORPTION	3,504	1,822	265	31	5,622

1915–16.

Opening Balance—					
Currency	5,097	5,179	3,941	8,505	5,097
Treasuries	51	53	35	23	51
Gold Standard Reserve	5,238	5,241	4,534	—	5,238
Total	10,386	10,473	8,510	8,528	10,386
Add—Imports tendered to Government	—	—	—	—	—
Deduct—Exports	34	2,019	62	107	2,222
Total	10,352	8,454	8,448	8,421	8,164
Closing Balance—					
Currency	5,179	3,941	8,505	8,162	8,162
Treasuries	53	35	23	27	27
Gold Standard Reserve	5,241	4,534	—	239	239
Total	10,473	8,510	8,528	8,428	8,428
Absorption after passing through Government treasuries and currency offices.	— 121	— 56	— 80	— 7	— 264
Add—Imports not tendered to Government but absorbed direct.	114	98	152	92	456
TOTAL ABSORPTION	— 7	42	72	85	192

APPENDIX B.—*continued.*

1916-17.

—	1st Quarter.	2nd Quarter.	3rd Quarter.	4th Quarter.	For Year.
Opening Balance—					
Currency	8,162	8,341	7,328	7,945	8,162
Treasuries	27	13	10	8	27
Gold Standard Reserve	239	65	1,045	169	239
Total	8,428	8,419	8,383	8,122	8,428
Add—Imports tendered to Government	—	—	—	—	—
Deduct—Exports	7	33	4	3	47
Total	8,421	8,386	8,379	8,119	8,381
Closing Balance—					
Currency	8,341	7,328	7,945	7,354	7,354
Treasuries	13	10	8	7	7
Gold Standard Reserve	65	1,045	169	103	103
Total	8,149	8,383	8,122	7,464	7,464
Absorption after passing through Government treasuries and currency offices.	2	3	257	655	917
Add—Imports not tendered to Government but absorbed direct.	60	150	195	795	1,200
TOTAL ABSORPTION	62	153	452	1,450	2,117

II.—*Statement showing in Thousands of £ Monthly and Annually Absorption of Gold Coin in* 1917–18 *and in* 1919–19.

1917–18.

——	April 1917.	May 1917.	June 1917.	July 1917.	August 1917.	September 1917.	October 1917.	November. 1917.	December 1917.	January 1918.	February 1918.	March 1918.	For Year.
Opening Balance—													
Currency - - - - -	7,354	7,037	6,246	4,335	4,279	6,525	6,925	7,525	7,617	7,800	7,810	7,582	7,354
Treasury - - - - -	7	17	17	17	10	9	7	5	5	5	5	5	7
Gold Standard Reserve - - -	103	200	151	47	53	45	67	—	—	—	—	—	13
Total - - - - -	7,464	7,254	6,414	4,399	4,342	6,579	6,999	7,530	7,622	7,805	7,815	7,587	4,464
Add—Imports tendered to or acquired by Government.	—	—	—	1,050	1,611	6	680	100	21	—	—	—	3,468
Sovereigns received from Australia and New Zealand in exchange for bullion sent from India.	—	—	250	250	1,000	750	—	—	168	—	256	—	2,674
Deduct—Exports - - - -	—	—	—	—	—	30	69	—	—	—	—		99
Total - - - - -	7,464	7,254	6,664	5,699	6,953	7,305	7,610	7,630	7,811	7,805	8,071	7,587	13,507
Closing Balance—													
Currency - - - - -	7,037	6,246	4,335	4,279	6,525	6,925	7,525	7,617	7,800	7,810	7,582	5,738	5,738
Treasury - - - - -	17	17	17	10	9	7	5	5	5	5	5	11	11
Gold Standard Reserve - - -	200	151	47	53	45	67	—	—	—	—	—	—	—
Total - - - - -	7,254	6,414	4,399	4,342	6,579	6,999	7,530	7,622	7,805	7,815	7,587	5,749	5,749
Absorption after passing through Government treasuries and currency offices.	210	840	2,265	1,357	374	306	80	8	6	—10	484	1,838	7,758
Add—Imports not tendered to Government but absorbed direct.	220	116	1,412	—	—	—	—	—	—	—	—	—	1,748
TOTAL ABSORPTION - -	430	956	3,677	1,357	374	306	80	8	6	—10	484	1,838	9,506

1918–19.

——	April 1918.	May 1918.	June 1918.	July 1818.	August 1918.	September 1918.	October 1918.	November 1918.	December 1918.	January 1919.	February 1919.	March 1919.	For Year.
Opening Balance—													
Currency - - - - -	5,738	3,006	3,418	5,118	5,814	5,997	6,426	6,682	7,149	7,180	7,181	7,180	5,738
Treasury - - - - -	11	72	48	34	28	22	7	2	2	2	2	2	11
Gold Standard Reserve - - -	—	—	—	—	—	—	—	—	—	—	—	—	—
Total - - - -	5,749	3,078	3,466	5,152	5,842	6,019	6,433	6,684	7,151	7,182	7,183	7,182	5,749
Add—Imports tendered to and acquired by Government.	2	1	—	—	1	—	—	—	—	—	—	—	4
Sovereigns received from Australia and New Zealand in exchange for bullion sent from India.	—	—	1,500	—	—	—	—	—	—	—	—	—	1,500
Coinages in India—													
(1) Sovereigns - - - -	—	—	—	—	170	392	244	461	28	—	—	—	1,295
(2) Mohurs - - - -	99	710	345	880	76	—	—	—	—	—	—	—	2,110
duct—Exports - - - -	—	—	—	—	—	—	—	—	—	—	—	—	—
Total - - - -	5,850	3,789	5,311	6,032	6,089	6,411	6,677	7,145	7,179	7,182	7,183	7,182	10,658
Closing Balance—													
Currency - - - - -	3,006	3,418	5,118	5,814	5,997	6,426	6,682	7,149	7,180	7,181	7,180	7,180	7,180
Treasury - - - - -	72	48	34	28	22	7	2	2	2	2	2	3	3
Gold Standard Reserve - - -	—	—	—	—	—	—	—	—	—	—	—	—	—
Total - - - -	3,078	3,466	5,152	5,842	6,019	6,433	6,684	7,151	7,182	7,183	7,182	7,183	7,183
Absorption after passing through Government treasuries and currency offices.	2,772	323	159	190	70	−22	−7	−6	−3	−1	1	−1	3,475
Add—Imports not tendered to Government but absorbed direct.	—	—	—	—	—	—	—	—	—	—	—	—	—
TOTAL ABSORPTION - -	2,772	323	159	190	70	−22	−7	−6	−3	−1	1	−1	3,475

III.—*Statement showing in Lakhs of Rupees Monthly and Annual Absorption of Rupees and Half-Rupees in* 1917–18 *and* 1918–19.

1917–18.

——	April 1917.	May 1917.	June 1917.	July 1917.	August 1917.	September 1917.	October 1917.	November 1917.	December 1917.	January 1918.	February 1918.	March 1918.	Total 1917–18.
Opening Balance—													
Currency - - - - -	17,08	13,67	14,68	19,61	25,90	28,55	28,88	28,88	24,01	18,27	14,92	12,56	17,08
Treasury - - - - -	4,56	4,06	4,66	4,93	4,70	4,24	4,21	3,51	3,08	2,91	3,45	3,89	4,56
Total - - - -	21,64	17,73	19,34	24,54	30,60	32,79	33,09	32,39	27,09	21,18	18,37	16,45	21,64
Closing Balance—													
Currency - - - - -	13,67	14.68	19,61	25,90	28,55	28,88	28,88	24,01	18,27	14,92	12,56	10,40	10,40
Treasury - - - - -	4,06	4,66	4,93	4,70	4,24	4,21	3,51	3,08	2,91	3,45	3,89	3,61	3,61
Total - - - -	17,73	19,34	24,54	30,60	32,79	33,09	32,39	27,09	21,18	18,37	16,45	14,01	14,01
Net difference + or — - - - -	+3,91	−1,61	−5,20	−6,06	−2,19	−30	+ 70	+5,30	+5,91	+2,81	+1,92	+2,44	+ 7,63
Add—New coins issued - - -	2,87	3,62	2,02	2,14	1,97	1,36	1,51	91	1,67	2,01	1,23	1,81	23,12
Deduct—Remittance to Mints for recoinage -	— 12	— 7	— 15	— 14	— 13	— 7	— 8	— 14	— 3	— 10	— 13	— 11	— 1,27
Deduct—Exports from India - - -	— 38	— 13	— 7	— 40	— 12	−10	— 24	— 3	— 2	— 4	— 7	— 2	— 1,62
Net absorption + or return — from circulation -	+6,28	+1,81	−3,40	−4,46	— 47	+89	+1,89	+6,04	+7,53	+4,68	+2,95	+4,12	+27,86

1918–19.

—	April 1918.	May 1918.	June 1918.	July 1918.	August 1918.	September 1918.	October 1918.	November 1918.	December 1918.	January 1919.	February 1919.	March 1919.	Total 1918–19.
Opening Balance—													
Currency - - - - -	10,40	7,26	5,14	5,66	8,02	11,18	12,38	10,49	8,48	10,56	11,58	13,50	10,40
Treasury - - - - -	3,61	2,55	2,42	2,23	2,12	1,99	1,84	1,82	1,64	1,55	1,79	2,13	3,61
Total - - - - -	14,01	9,81	7,56	7,89	10,14	13,17	14,22	12,31	10,12	12,11	13,37	15,63	14,01
Closing Balance—													
Currency - - - - -	7,26	5,14	5,66	8,02	11,18	12,38	10,49	8,48	10,56	11,58	13,50	16,66	16,66
Treasury - - - - -	2,55	2,42	2,23	2,12	1,99	1,84	1,82	1,64	1,55	1,79	2,13	2,10	2,10
Total - - - - -	9,81	7,56	7,89	10,14	13,17	14,22	12,31	10,12	12,11	13,37	15,63	18,76	18,76
Net difference + or — - - - -	+4,20	+2,25	— 33	—2,25	—3,03	—1,05	+1,91	+2,19	—1,99	—1,26	—2,26	—3,13	— 4,75
Add—New coins issued - - - -	2,79	3,39	3,49	3,96	5,17	4,21	2,78	2,70	8,37	5,84	3,95	4,14	50,79
Deduct—Remittance to Mints for recoinage -	— 11	— 4	— 6	— 8	— 4	— 3	— 2	— 3	— 5	— 3	— 4	— 8	— 61
Deduct—Exports from India - - -	— 3	—	—	—	—	— 14	— 10	—	— 5	—	— 9	—	— 41
Net absorption + or return — from circulation -	+6,85	+5,60	+3,10	+1,63	+2,10	+2,99	+4,57	+4,86	+6,28	+4,55	+1,56	+ 93	+45,02

IV.—*Statement showing in Lakhs of Rupees Net Imports of Bullion and Absorption of Rupees.*

	Private Net Imports of Gold Coin and Bullion. 1.	Private Net Imports of Silver Coin and Bullion. 2.	Absorption of Rupees. 3.	Total of Columns 2 and 3. 4.	Total of Columns 1, 2 and 3.
1909–10 - -	21,67	9,36	13,22	22,58	44,25
1910–11 - -	23,98	8,57	3,34	11,91	35,89
1911–12 - -	37,77	5,29	11,54	16,83	54,60
1912–13 - -	37,58	6,57	10,49	17,06	54,64
1913–14 - -	23,32	6,24	5,32	11,56	34,88
1914–15 - -	8,45	10,01	−6,70	3,31	11,76
1915–16 - -	4,90	5,58	10,40	15,98	20,88
1916–17 - -	4,20	−2,16	33,81	31,65	35,85
1917–18 - -	3,09*	1,46	27,86	29,32	32,41
1918–19 (approximate)	3	6	45,02	45,08	45,11

* In addition, Rs. 18,37 lakhs of gold imported by private agency were acquired by Government.

V.—*Statement showing in Lakhs of Rupees Net Exports of Merchandise and Remittances to India through Government.**

	Excess of Net Exports of Merchandise over Net Imports. 1.	Remittances to India through Government, less Reverse Sterling Drafts. 2.
1909–10 - - - - -	70,82	41,73
1910–11 - - - - -	80,53	40,33
1911–12 - - - - -	89,27	41,37
1912–13 - - - - -	85,09	40,33
1913–14 - - - - -	65,63	48,40
1914–15 - - - -	43,66	−1,52
1915–16 - - - - -	65,39	24,76
1916–17 - - - - -	95,53	59,04
1917–18 - - - - -	92,14	81,75
1918–19 - - - - -	84,82	58,05

* Includes *all* remittances through Government.

APPENDIX C.

Statement showing in Lakhs of Rupees Statistics in regard to Coinage, Absorption, and Stocks of Rupees, purchase of Silver and Note Circulation—vide *paragraph* 18 *of Memorandum.*

Year.	Coinage of New Rupees.	Absorption of Rupees.	Amount of Silver purchased for Coinage (Value).	Stock of Rupees at Close of Year in P.C.R.	Active Note Circulation at Close of Year.
1909–10 - - -	—	13,22	—	29,28	39,98
1910–11 - - -	—	3,34	—	26,06	40,17
1911–12 - - -	—	11,54	—	15,40	44,61
1912–13 - - -	14,93	10,49	10,59	16,45	47,32
1913–14 - - -	9,13	5,32	6,79	20,53	49,97
1914–15 - - -	—	−6,70	—	32,34	43,96
1915–16 - - -	—	10,40	—	23,06	53,19
1916–17 - - -	28,54	33,81	26,86	17,08	67,08
1917–18 - - -	21,29	27,86	21,15	10,40	84,30
1918–19 - - -	49,52	45,02	69,00	16,66	1,33,59

APPENDIX D.

The Secretary of State, in his telegrams dated the 25th and 27th December 1918, asked for the views of the Government of India on certain important questions relating to our future currency policy. The main questions there raised will be dealt with by the Government of India when they come to reply to the Secretary of State, and in the present note therefore it is sufficient to refer very briefly to the main issues on which our future policy will turn. The position is, in short, that in two respects the problem is fundamentally different from those which have previously come under authoritative examination by the various Commissions and Committees which have enquired into the subject. *Firstly*, the main objective of all these was to devise measures which would prevent the exchange value of the rupee from falling below 1*s.* 4*d.* *Secondly*, the possibility of a rise in the value of the silver content of the rupee above its face value on a basis of 1*s.* 4*d.* rate of exchange was not contemplated. These two aspects of the question are no doubt closely inter-related; they are not, however, absolutely identical. It is true that a rise in the world's price of silver must necessarily entail a reconsideration of our whole position and a consequent raising of the exchange value of the rupee, unless the unacceptable alternative of debasement were resorted to. On the other hand, however, it is by no means inconceivable that exchange, for a considerable period at any rate, should attempt to break away from the 1*s.* 4*d.* basis from causes independent of a rise in the price of silver. Our own experience at the end of 1916 affords an example of this in actual practice. Such a rise could, however, of course only happen as the result of restrictions on the extent to which the Secretary of State is selling Councils, coupled with restrictions on the movements of the precious metals which would prevent the settlement by their import of the balance of trade in favour of India. In time this latter factor would naturally tend to react, owing to the demand for silver for import into India being greater than its supply, to raise the intrinsic value of the rupee above what may for convenience be called its melting point. A further main problem is the course to be adopted should the Government of India be unable to obtain adequate supplies of silver to ensure the encashment of their notes.

2. Apart from these main questions, however, there are several important questions discussed in the Report of the Chamberlain Commission on which no final decision was arrived at at the time and which will now of necessity have to be reconsidered; and such reconsideration must necessarily have regard to the experience which we have gained during the war of the difficulties with which the machinery of our currency policy is likely to be assailed, and the manner in which it should be remodelled if necessary in order to cope with future crises such as those which we have gone through in the last 4½ years. I refer of course mainly to the constitution of our Paper Currency and Gold Standard Reserves and certain questions which arise in connection with these Reserves, and the management of our Treasury balances such as the sale of Councils or, when necessary, sterling drafts on London.

3. It will, I think, be convenient to deal first with the case of the Gold Standard Reserve, as the issues here are simpler and more clear cut, and the decision arrived at with regard to them will have some bearing in the case of the Paper Currency Reserve also. Whatever the decision arrived at with regard to the future of exchange, the necessity for a powerful and effective Gold Standard Reserve will, I take it, remain, and it is obvious that the resources ultimately required for ensuring the maintenance of a standard of say 18*d.* will be more rather than less than with a standard of 1*s.* 4*d.* for the rupee. The view taken by the Chamberlain Commission with regard to this reserve is summarised in paragraph 223, items (10) to (16), of their Report and the paragraphs in the body of the Report there referred to.

4. With regard to these decisions it is, I think, incontestable that, if the function of the Gold Standard Reserve is in future to be regarded as identical with that attached to it in the past, the most suitable place for the location of the whole of the Reserve is London. In the light of our more recent experience, however, this conception is perhaps too limited. It has been shown that we had to meet the danger not merely of exchange falling, but also of its rising, and with the restrictions on the movements of the precious metals, especially gold, which are likely to continue in

force for a considerable period, the demands on us for meeting Councils will in all probability at times prove more embarrassing than they have been under normal conditions in the past. I refer below to the constitution and size of the Reserve and propose that a substantial part of it should be held in gold. For the reason just given it will, I think, be desirable to hold a considerable portion of this gold in India. It must be remembered that even in periods of interruption of communications, this could be employed little, if any, less effectively in India than in London. For instance, apart from actual shipment, we could, if necessary, ear-mark it on behalf of the Bank of England against delivery to us of funds in London, or we could transfer it to the Paper Currency Reserve against a corresponding release of investments from the Paper Currency Reserve in London against which Reverse Councils could be sold. Moreover, apart from any question of logic, there is no doubt that there is a very strong sentimental feeling in India that her gold resources or a substantial portion of them should be held here, and some concession must almost inevitably be made to this sentiment. This possibility of holding a portion of the Reserve in India as part of our permanent policy is of course quite distinct from the occasional necessity for the transfer of a portion of the Reserve from London to India as part of the measures necessary for maintaining exchange. Indeed, though it will be desirable to lay down the general principles on which to work, as a normal matter, in connection with the location both of our Gold Standard Reserve and other balances, in practice the course to be actually followed will have to be governed by the circumstances and necessities of the time, and this fact must be regarded as governing generally the various suggestions which I have made except in so far as, in the case of the Paper Currency Reserve, they will have to rest on a statutory basis.

5. With regard to the constitution and size of the Gold Standard Reserve the Commission held (*a*) that the profits on the coinage of rupees should for the present continue to be credited exclusively to the Reserve, and (*b*) that no limit could at that time be fixed to the amount up to which the Gold Standard Reserve should be accumulated. The Commission further held that a much larger proportion of the Reserve should be held in actual gold, a total of £10 million being immediately aimed at, to be raised, as opportunity offered, to £15 million, and that thereafter the authorities should aim at keeping one-half of the total reserve in London in actual gold. The Reserve has increased considerably in size since the Commission reported, and the actual balance of the Reserve is at the present about £35½ million. This is made up roughly as follows:—

	£		
British Treasury Bills - - - -	13½	million.	
Exchequer Bonds maturing between 1920 and 1922, just under - - - -	10	,,	
Five per cent. National War Loan 1829–47 -	3¾	,,	
Other securities, mostly longer term - -	2	,,	odd.
Cash placed by Secretary of State at short notice -	6	,,	,,
Total -	35		

6. My own feeling is that we should aim at seeing the Reserve built up to a figure of not less than £40 million. Apart from the suggested extension of its functions, our liabilities for our home charges continue to grow, and the resources ultimately required for maintaining exchange at 1*s.* 6*d.* are likely to be more rather than less than with a 1*s.* 4*d.* rate The question of the addition to the Reserve of the profits on rupee coinage is at present unfortunately academic. It will, however, continue to grow by accretions of interest. Possibly after a figure of £40 million has been reached, half of any subsequent accretions could profitably be diverted to capital expenditure; while when a £50 million figure is attained it would in my view be safe to utilise for capital expenditure all the receipts which would otherwise accrue to the Reserve.

7. Of the total reserve I should like to aim at a very large proportion, such as £20 million, or £25 million for choice, in actual gold. This could, however, of course only be gradually acquired by degrees as circumstances permit, and in particular in so far as this can be done without material prejudice to Imperial interests. A gold holding of this magnitude would be a source of great material strength to our exchange position, apart from the incidential elasticity which this large holding would give to our operations. For example, if we had had a holding

of the kind during the war, this would have enabled us, instead of taking powers to expand our currency investment in the way in which we have done, to avoid this by a transfer of actual gold from the Gold Standard Reserve to the Paper Currency Reserve in London, the securities in question being placed in the Gold Standard Reserve instead of in the Paper Currency Reserve.

8. I turn now to the Paper Currency Reserve. Here, as in the case of the Gold Standard Reserve, it would be waste of time to embark on a lengthy recapitulation of earlier discussion, and I do not think we should hesitate to recant any previous pre-conceived opinions expressed before or during the war in so far as we feel justified in doing so in the light of more recent experience. It will probably be convenient, however, to take as the starting point the recommendations made by the Chamberlain Commission, *vide* paragraphs 102 *et seq.* of their Report. At that time the note circulation amounted to Rs. 68·97 crores, (*vide* Currency Return for 31st March 1913), of which Rs. 14 crores were invested, Rs. 10 crores in our rupee paper and the equivalent of Rs. 4 crores in Consols. At the time when the latter of these previous investments was made, there was usually some discussion whether these should be rupee or sterling investments, the point on which the discussion turned being which of the two could in the event of necessity be more readily realised. The Chamberlain Commission recommended in this respect that the Paper Currency investment should be brought up to Rs. 20 crores by transferring Rs. 6 crores of sterling securities from the Gold Standard Reserve to the Paper Currency Reserve against a transfer of £4 million of gold to the latter—*vide* paragraph 112 of the Report.

We have unfortunately been compelled by the force of circumstances during the war to go very considerably further than the Chamberlain Commission recommended, or than prudence would have dictated if events had not been too strong for us. Our present temporary powers allow of a fiduciary issue of 100 crores, of which 10 crores may be invested in Government of India securities, 10 crores in either Government of India securities or securities of the British Government, and 80 crores in British Treasury Bills. Against these powers we have invested 10 crores in rupee paper, 1½ crores in Consols, about 6 crores in India Treasury Bills and about 81 crores in British Treasury Bills, leaving a balance of only about 1½ crores unutilised.

9. The war has, among other things, compelled us to review our ideas as to the legitimacy and extent of our Paper Currency investment. It has shown that no long dated security can be regarded as realisable; in fact, any issue of rupee securities to the Paper Currency Reserve in India represents, it must be recognised, a permanent immobilising of that portion of the Reserve. As regards sterling investments, Consols were originally adopted as being likely to be in all circumstances readily realisable. Here, again, it has been found that in times of grave crisis they were practically unrealisable, apart from the great depreciation which they underwent. I think that the principles which we reached in the discussion with the Secretary of State about the replacement of the Consols held in the Paper Currency Reserve by more suitable securities may be accepted as sound. Briefly, the position may perhaps be stated as follows. The main object of an investment, whether in rupee or sterling securities, is of course to cover the expenses of our currency note system and incidentally to bring in some profit thereon, it being for practical purposes unnecessary to hold the whole of the Reserve in the form of coin or bullion, since it is inconceivable that all the outstanding notes should be presented for encashment. If counsels of perfection could be followed it would be desirable that both the rupee and sterling portions of the investment should be held in readily realisable securities. In practice, however, a very clear line of distinction can be drawn between the two portions of the investment, and we must admit that, in present conditions, the rupee portion of the investment is for all practical purposes unrealisable. We are likely to require for many years to come all the capital which we can raise in India for railways and other productive expenditure, and consequently we shall have to borrow in the market all the money that we can raise on reasonable terms for our needs and those of the provinces. We could not, therefore, expect in a time of stress to be able to turn into cash the additional securities created for issue to our Paper Currency Reserve.

10. It follows then that, since we must regard the rupee portion of our investment as practically immobile subject to the qualification which I shall make later, this should be limited to amounts which so far as it can humanly be foreseen, we shall never require to realise. To this extent, but to this extent only, investment in rupee securities can I think, be regarded as entirely legimate. In so far

as rupee securities held in the Reserve have in the past been purchased in the open market, these have resulted in the Government of India directly reducing their liabilities to the public. In so far as the investment has been or will be built up in future by issuing securities direct to the Paper Currency Reserve (which will probably be the course followed), the Government of India will hold assets against them in the nature of productive works constructed out of the proceeds. The stability of any Paper Currency system as a whole must necessarily ultimately be dependent on the credit of the Government adopting it; in so far as the Government of India hold their own paper, this is tantamount to an improvement of their position and credit by the avoidance of debt, since the funds taken from the reserve are in fact utilised to increase the assets of Government. In other words, the portion of the Paper Currency investment held in rupee securities represents investments in permanent and remunerative assets such as our railway estate. It is on the other hand obvious, as I have already indicated, that, while this investment is legitimate, the extent to which it is legitimate is absolutely limited by the amount up to which we can afford permanently to lock up our reserves without any real loss of security. The limit must therefore be placed sufficiently low to ensure that there is some margin at a time of grave crisis such as that through which we have passed, so that there will in that event still be a substantial margin of safety by which we can when necessary increase our fiduciary issues without bringing about a débâcle. In other words, the justifiable limit of investment should be considerably below what we hold to be the real margin of safety, though of course our actual determination of the limit must ultimately be an arbitrary one.

11. Outside the permanent lock-up of a portion of our Paper Currency investment in our own securities, it is, I think, legitimate further to provide for temporary investment, again to a limited extent. The bulk of this, however (and the whole of it in so far as it does not represent our own securities) should be held in a readily realisable form. As regards this portion of the investment, realisability is essential. The ideal type of such investment of one kind is the British Treasury Bill; and of another kind discounts of commercial bills drawn against goods. Apart from these, I also see no objection to temporary investment to a limited extent in our own securities, provided the total limit for the investment in Government of India securities, permanent and temporary, is well within the real margin of safety: the differentiation here is one of convenience, as is explained in more detail later; and for the purpose of determining the extent to which such temporary investment may be permitted, the securities held in it should be regarded as not possessing the merit of realisability in the event of necessity.

12. A further important point to be considered in regard to our future Currency Reserve policy is whether the investment as a whole, or of each class, should be determined by some fixed limit, to be raised or altered if necessary by legislation from time to time, or should be fixed by law at some percentage of our note circulation, so that with the fluctuations in that circulation the limit would automatically change. It will perhaps be convenient to refer here to the actual proposals made by the Chamberlain Commission. Their idea was that the maximum of the fiduciary portion should be fixed at the amount of the notes held by Government in the reserve treasuries *plus* one-third of the net circulation for the time being. One practical difficulty arising in connection with a percentage limit is that a sudden encashment of notes might bring down the metallic reserve below the statutory proportion. It would be possible to insert a provision in the law to meet contingencies of the kind; without some such provision, when once the prescribed proportion has been reached, not a single additional note could be cashed without a breach of the law. This may not be of any serious practical importance; on the other hand, a provision of the kind might be open to criticism as appearing to indicate that Government had it in mind to pursue an incautious policy in regard to their investments. The best way of getting round this difficulty is, I think, to prescribe the percentage on a basis of some average of past circulation over a period of years. At one time when we commenced to consider this question in connection with the Chamberlain Report we thought of taking, as the basis of permissible investment in a particular year, a percentage of the average net circulation over a period of 36 months ending on the 31st March (*i.e.*, the last day) of the preceding financial year.

13. I doubt, however, whether it is necessary to differentiate between net and gross circulation for the purpose; any such difference will moreover disappear if

the reserve treasuries are in course of time made over to a bank constituted by the amalgamation of the Presidency Banks. In any case, I have never been able to appreciate the justification for the particular treatment of the reserve treasury holdings and the balance of the note circulation adopted by the Chamberlain Commission. Similarly, I am inclined to think that the average by months, which we previously contemplated, was an unnecessary refinement, and that it would be sufficient to take an average of the gross circulation on the closing days of the three preceding financial years. The following statement shows for the years from 1908–09 onwards the gross circulation (*a*) on the 31st March and (*b*) on an average for the 12 months of the year.

Gross Circulation (Crores).

	On 31st March.	Average for 12 months
1908–09	45·49	44·52
1909–10	54·41	49·66
1910–11	54·99	54·35
1911–12	61·36	57·37
1912–13	68·98	65·62
1913–14	66·12	65·55
1914–15	61·63	64·04
1915–16	67·73	64·10
1916–17	86·37	76·14
1917–18	99·79	101·77
1918–19	—	—

14. I can, I think, most conveniently explain the arrangement which I would provisionally suggest by first briefly stating my proposals, and then explaining how they would work out in practice. On the basis of a three-year average on the 31st March figures, the assumed circulation on which the investment percentage would be calculated in the years from 1911–12 onwards would be as follows :—

(Figures in Crores.)

1911–12	51·6	
1912–13	56·9	
1913–14	61·4	
1914–15	65·5	
1915–16	65·6	
1916–17	65·2	
1917–18	71·9	
1918–19	84·6	
1919–20	113·0	(based on circulation 7th March 1919).

I suggest that the investments should be limited to a total of 50 per cent. of the above circulation basis, split up into four classes mentioned below. Of these, the individual maxima would ordinarily be the percentage of the total circulation specified against each; but I think that to the limited extent which I proceed to suggest, it should be permissible temporarily to increase the limit of certain classes at the expense of the others, provided that the total limit of 50 per cent. is not exceeded :—

A.—Maximum Permanent rupee investment	20 per cent.
B.—Maximum Temporary rupee investment	10 ,,
C.—Maximum discount of commercial Bills of Exchange against goods	10 ,,
D.—Maximum amount of holding in British Treasury Bills	10 ,,
Total permissible investment	50 ,,

While, however, this arrangement would protect us against temporary fluctuations in our gross circulation, it would still be necessary to make some

provision for the possibility of occasional contractions in our note circulation resulting in a reduction of the basic circulation figure in individual years and consequently in the permissible investment. This contingency might be met by some such arrangement as the following. It would not be permissible to make new investments in rupee securities to an extent which would bring the total of these over the 20 per cent. maximum on the circulation basis in force at that time; but if, as the result of a contraction in the circulation figure, the investment of such securities previously effected should exceed this new circulation standard, it would not then be obligatory to make any reduction in the permanent rupee investment previously effected. This, however, should be subject to the proviso that any excess over the 20 per cent. limit must be set off by a corresponding reduction in the 10 per cent. limit allowed for the temporary rupee investment or, in the unlikely event of the contraction in the circulation figure being so great as to cause even this limit to be exceeded by a reduction in the British Treasury Bill investment. In other words, the provision would be that the total of permanent and temporary rupee investments and British Treasury Bill investment should not exceed 40 per cent. of the basic figure, any excess under permanent rupee investment being first set off by reduction in the permissible temporary rupee investment, and subsequently if necessary by a reduction in the permissible Treasury Bill investment. In practice, we should not necessarily invest up to the hilt against A and B, while the fact that an average figure is taken for the basis would probably mean that any rapid and material contraction of this figure would be unlikely.

15. I think that the above suggestions satisfy the criteria of safety which I have already set out, and that the total limit of 50 per cent. for all forms of investment combined together with the individual limits for the separate classes of the temporary investment should give us practically absolute security, while the differentiation of the temporary investment into three classes has the merit of providing a considerable amount of elasticity. The total limit of investments in our own paper, including temporary investments, would (subject to the very improbable exception mentioned in the preceding paragraph) be 30 per cent. of the basic figure, which is unlikely to be in substantial excess of and will normally be lower than our actual gross circulation at any particular time. In so far as the temporary investment may be held in discounts of commercial paper, the notes issued against these will be automatically retired when no longer wanted and thus improve the percentage of metallic reserve to the volume of notes actually in circulation at that time.

It may, however, possibly be said that, while the elasticity just claimed makes some provision for a gradual growth of the fiduciary portion of the Reserve with the growth of the circulation from year to year and also includes a moderate provision for the holding of securities in London, it does not provide adequately for the seasonal fluctuations in the demand for currency. I should, therefore, be inclined to develop the above suggestions further by making rather a more elastic provision for the discount on commercial bills. In practice it is, it is true, doubtful whether at present, even if we announce that we would be prepared to discount for a central bank (or the Presidency Banks) at a very favourable rate, the bank would be likely to come to us for any large assistance in this way unless it was very hard pressed and its own resources were very tight at the time. This whole question has, however, come very much to the front during the last year or so. Such discounts form an important basis of the Federal Reserve Board system, and a recent speech by Sir Edward Holden has attracted much attention. My own view is that, though this system was not favoured by the Cunliffe Committee (if indeed it was considered) very great weight must be attached to the arguments adduced in favour of it. Very briefly, circulation due to discounts of this kind is automatically regulated by the demand for currency, and entirely eliminates any danger of permanent inflation. The security is absolutely good, and the arrangement is based on the fact that (as the "Times" put the position) "a self-liquidating bill has a self-retiring note as its concomitant." This would be particularly the case in India where the seasonal fluctuations occurring within very brief periods are so violent; and the existence of this facility might of itself tend to do a good deal to level down the bank rates, even though it was not at first taken any very extensive advantage of. I should, therefore, be inclined to develop the elasticity of my proposals in this direction by making it legitimate to hold in the Reserve discounts up to 20 per cent. of the basic circulation figure, provided that this was at the expense temporarily of one or other of the other forms of securities

which could be legally held as part of the Reserve. This might make the drafting of the actual provisions a little complicated, but the idea is, I think, quite a simple one.

16. Under the suggested arrangement our maximum investment powers for next year, if these were fully worked up to, would ordinarily be as follows :—

	Crores.
Permanent rupee investments	22·6
Temporary rupee investments	11·3
Discounts of bills of exchange against goods	11·3
British Treasury Bills	11·3
Total	56·5

against a gross circulation at the moment of over Rs. 152 crores. Assuming that no loans were outstanding from the Reserve against mercantile paper, the invested portion of the Reserve would be Rs. 45·2 crores only, or roughly only about 30 per cent. of the circulation. It is evident that it will take us a considerable time to work down to the proposed ideal in the matter of our investments. If our present note circulation is maintained at its present level, or even if a fairly material contraction takes place within the next year or so, our investing power will, of course, increase to some extent with the elimination from our average of the lower circulation figures of 1916–17 and 1917–18. Even so, some time will almost certainly elapse before we can bring our investments down to the suggested dimensions. It is, however, I think, clear that if and when we are able to do so, our position will have been made secure.

17. There is one incidental point which it is necessary to mention in regard to British Treasury Bills. So long as these continue to be issued, I do not think that we could hope to obtain a more suitable form of security for this portion of the investment scheme. There is, however, of course the possibility that the Treasury Bill tap may be turned off ; in that case it may be necessary to prescribe some other form of security, *e.g.*, securities of the United Kingdom maturing within less than a year. It is practically certain that Great Britain will have to continue to issue short-term debt in some form or other for as long a period as need be taken into consideration.

18. A more practical question is the possibility of the reduction of our present huge holding of British Treasury Bills. This is of some importance in view of possible modification in our standard rate of exchange. For example, if we adopt a 1*s.* 6*d.* rate as the official rate for the purpose of our accounts, we should at once have to show a material reduction in the rupee value of our British Treasury Bill holding, and this apparent loss would be further increased if a higher exchange rate, such as 1*s.* 8*d.*, were adopted for the purpose. I think, therefore, that we should keep before us the desirability of the reduction of our British Treasury Bill holding, and when our Treasury position permits of this, suggest to the Secretary of State that he should pay for silver from his currency balances, *i.e.*, by the proceeds of his " currency " Treasury Bills, or (which would be equivalent in effect) that we should by making a transfer from Treasury to currency in India enable the Secretary of State to transfer his Treasury Bills from currency to his Treasury. If the present exchange conditions continue and if our loan is at all a success this year, it is by no means improbable that we may be able to make some progress in the desired direction. If we are eventually faced with some loss in the above manner, we shall have to devise some expedient for meeting it. *Faute de mieux* it could possibly be dealt with by issuing (within the admissible percentage) rupee securities to the Reserve to the extent necessary to cover the deficiency. But I need hardly add that I do not contemplate increasing our permanent rupee investment in any case until our bloated Treasury Bill investment is reduced to more normal dimensions.

It may be noted here that there is a possibility of a deficiency in the total Reserve arising by reason of the adoption of a higher exchange rate owing to the consequent modification of the rates at which the gold holding in the Reserve is expressed in rupees.

19. As regards the temporary rupee investment, my primary object in making a distinction between this and the permanent investment is to leave a substantial

margin to cover the possible case of a contraction of the circulation—the total percentage of the two combined, namely, 30 per cent. of circulation, being, as I consider, safe. This arrangement, however, would also have certain incidental advantages which I think we are entitled to make use of, provided that it is accepted that the 30 per cent. proportion is a safe one, and that consequently our currency arrangements will be in no wise prejudiced. For example, this restricted power of borrowing temporarily from the Reserve would be very useful in the case of a temporary heavy demand for Councils at a time of low treasury balances or in connection with our Ways and Means arrangements in other respects. Thus we may at times want some assistance to help us over a tight place when we contemplate floating a loan but market conditions are unfavourable to its immediate flotation, or we may when floating a loan desire to ease market conditions for it by increasing our balances with the Presidency Banks. Again, recourse to these temporary powers might be very valuable to us in conversion or funding operations in connection with our loans. With the heavy maturities of temporary debt which we have to meet in the next few years, we may from time to time experience some embarrassment in raising enough by loan for our ordinary capital programme concurrently with the discharge of our maturing liabilities, and the possibility of indenting for a time on the Paper Currency Reserve within the limits allowed might prove very helpful and enable us to attack these operations with much greater confidence.

To avoid misconception, I must, however, add here that I hope that it will not be understood that I am suggesting any tampering with our Paper Currency Reserve, as I contemplate that any assistance that we should get from it in this way should be rigidly restricted and kept within the total limit of 30 per cent. of our rupee securities, permanent and temporary, to be held in it.

20. It will be noticed that I have not provided for the possibility of loans from the Paper Currency Reserve in London, an alternative recommended by the Chamberlain Commission, *vide* their paragraph 114. I regard this as objectionable, and to embody any such suggestion in our Act would certainly lay us open to attack by publicists in India.

21. As regards the location and constitution of the metallic portion of our Reserve, the provisions of our present permanent Act, II. of 1910, are I think generally suitable. It will, however, be necessary if the 1*s.* 4*d.* exchange rate is departed from to consider a revision of the ratio at which gold held in the Reserve is expressed in rupees. It will also be a matter for consideration later whether the half-rupee should continue to be unlimited legal tender, and in fact whether silver half-rupees should continue to be coined. I would, however, introduce a modification in the provisions of the present section 21 to make it clear that coin or bullion held by the Secretary of State or the Governor General in Council in transit to India from any place, instead of from England only, can be deemed to be part of the Reserve. I doubt whether it will be necessary to retain the various glosses introduced by temporary legislation to cover the cases of silver held in the United States or of gold sent to Australia for coinage.

As regards our actual practice as distinct from our legal obligations under the Act, the only point of difficulty is the location of any gold that we may from time to time hold in the Paper Currency Reserve. I think that ordinarily it would be suitable to keep in India any gold held in the Paper Currency Reserve. This would, however, be a matter for decision with reference to the circumstances of the time, and it seems unnecessary to attempt to forecast these or to lay down beforehand any definite principles in the matter. For example, the Secretary of State may find it convenient, as he has in the past, to sell telegraphic transfers against gold in transit from Australia to London. I would not, in any case, object, as a minor variant, to a limited amount of the Paper Currency Reserve gold being held in England. These questions are, however, of little more than academic importance at present.

22. A somewhat cognate question is that of the gold mint. The position with regard to this is that during the war we coined gold mohurs or fifteen-rupee pieces in the Bombay Mint and also sovereigns at a branch of the Royal Mint temporarily opened at Bombay. The Secretary of State, however, now proposes to agree to the suggestion that this should be closed. We are telling him that we cannot resist this proposal, but trust that the closure will be regarded as temporary and without prejudice to any future decision on the subject. Here, I think, the matter must rest at present.

23. In considering the various problems which will have to be settled in connection with the Paper Currency Reserve, I have not referred to the possibility of our having at some time in the future to declare our notes inconvertible. I do not think, indeed, that it materially affects any of the above suggestions. If inconvertibility should unfortunately come upon us, we should, I presume, entirely discontinue for the time the issue of rupees: otherwise the evil of discount on our notes would probably tend to be greatly exaggerated. In that event, however, we should, I imagine (unless the price of silver was temporarily prohibitive), endeavour to go on building up the holding of silver rupees in our reserve until we were satisfied that we had again reached a position in which we could undertake once more to encash our notes freely. My proposals must, I think, however, be regarded as being based on the underlying assumption of the removal of the restrictions placed in various countries on the movements of silver and of the raising of our embargo on its import into India and export therefrom. They are also, I think, necessarily based on the further assumption that the rate of exchange will be fixed at a point which will not make it a paying proposition to melt down rupees or to export them from India.

24. A reference to certain subsidiary proposals of the Chamberlain Commission is, I think, necessary at this point. In paragraph 115 of their Report, they recommend that the Government of India should increase, whenever and wherever possible, the number of places at which notes are encashable as of right, and further that notes of Rs. 500 should be at once universalised, and the possibility of the universalisation of the higher denominations be subsequently considered in the light of the experience thus gained. In the light of the experience which we have gained during the war, I think that these proposals must now fall to the ground or at any rate be shelved for an indefinite period. As regards the further suggestion that we should increase the extra-legal facilities for the encashment of notes, we may admit the desirability of this and the recommendation, indeed, represents the policy followed from August 1914 until early in 1918. How far or how soon we are likely in practice to be able to reopen facilities of the kind is a matter in which we shall have to be guided by circumstances.

25. I need only say a few words about our remittances to and from England. A policy of stable exchange connotes the free sale of Councils, to the extent of the trade demand for them, at a rate in the immediate neighbourhood of our standard exchange figure within the limits represented in normal times by the gold points. The future in respect of the restoration of real gold points is obscure, and some arbitrary rate in the neighbourhood of our standard rate would consequently have to be substituted. Similar considerations apply to our Reverse Councils. I may add, however, with regard to these also, that their free sale when required by trade will be an essential if a stable rate of exchange is to be maintained. I regard it as of great importance that the Reverse Councils should be practically on tap, and that there should be no delay in announcing an offer of them in India immediately a demand for them springs up. I need not develop this point at any length, as it has on various occasions formed the subject of communications between the Government of India and the Secretary of State. But delay can only be eliminated if the Government of India have received a general authorisation from the Secretary of State to announce at any time—and without further previous reference to him—the sale of sterling drafts including immediate transfers, to the extent of £1 million a week until further notice, at rates previously settled for deferred and immediate transfers. If £1 million proves insufficient on any occasion, there is no objection to the Secretary of State's sanction being required before the allotment of £1 million is increased. But an announcement of £1 million in the first instance will probably be sufficient to meet any situation that is likely to arise. Delay in making such announcement has in the past always led to inconvenience and uncertainty, as well as to inflated tenders. On similar grounds it is of importance to include immediate transfers in the offer; this will relieve trade of any anxiety, while at the same time if the banks, &c., know that they can get "immediates" at any time, they will strictly limit their applications to the amounts absolutely required.

H. F. HOWARD.

20th March 1919.

APPENDIX II.

Memorandum for the Use of Witnesses.

1. The terms of reference to the Committee are as follows:—

"To examine the effect of the war on the Indian exchange and currency system and practice, and upon the position of the Indian note-issue, and to consider whether, in the light of this experience and of possible future variations in the price of silver, modifications of system or practice may be required; to make recommendations as to such modifications, and generally as to the policy that should be pursued with a view to meeting the requirements of trade, to maintaining a satisfactory monetary circulation, and to ensuring a stable gold exchange standard."

2. The Indian currency system, as developed in the light of the policy adopted after the closing of the mints to the unrestricted coinage of silver in 1893, was based on the following principles.—

(1) The control of the amount of new silver coined was entirely in the hands of the Government of India;

(2) The rupee was legal tender without limit of amount;

(3) The Secretary of State for India undertook to sell bills of exchange on India without limit of amount at 1*s.* $4\frac{1}{8}$*d.* per rupee as a maximum rate, and maintained, though without formal notification, the practice of not selling below 1*s.* $3\frac{29}{32}$*d.* per rupee. If, owing to the course of trade, the demands for remittances from India threatened to bring the exchange value of the rupee below 1*s.* $3\frac{29}{32}$*d.* the practice of the Government was to make weekly offers of drafts on London at a rate slightly below 1*s.* $3\frac{29}{32}$*d.* until the exchange value of the rupee was restored to the limits mentioned above. The Gold Standard Reserve was maintained for the purpose of enabling the Secretary of State to meet these drafts on London.

(4) The British sovereign and half-sovereign were legal tender for 15 and $7\frac{1}{2}$ rupees respectively, and Government undertook to issue rupees to the public in exchange for sovereigns and half-sovereigns at the same rate.

The effect of these arrangements was to keep India supplied with Indian currency to the full extent of the effective demand, and to maintain the rate of exchange in the neighbourhood of 1*s.* 4*d.* per rupee.

It is relevant to mention that, though the use of gold as currency was not essential to the system, gold was freely imported and used for currency; with the result that the demand on the Government for rupees was reduced.

3. The maintenance of the system described above depended, at times when there was a strong demand for remittances from England, on the existence of the two following conditions:—

(1) It was necessary for the Government of India to have at their command a sufficient supply of Indian currency to meet the public demand.

(2) Unless rupees were to be issued at a loss to the Government, it was necessary that the price of silver should not be higher than that corresponding to a bullion value of 1*s.* 4*d.* for the rupee. (The bullion value of the rupee is 1*s.* 4*d.*, with the price of silver at 43*d.* per standard ounce.)

4. These conditions ceased to exist from 1916. The demand for currency in India was abnormally high, partly in consequence of the heavy demand for raw materials from India for war purposes and the high prices realised for them, and partly in consequence of the exceptional disbursements by the Indian Government on behalf of the Imperial Government on the Expeditionary Forces based on India.

On the other hand, while the demand for Indian produce and manufactures from belligerent and neutral countries continued to be intense, imports into India were severely curtailed by the limitations imposed by war conditions on the manufacturing capacity of Western countries and the inadequate supplies of tonnage.

While the demands for currency were thus particularly heavy, the available supplies were restricted by unusual causes :—

(1) Silver was in great demand by belligerent countries, while the output of the mines was restricted by disturbances in Mexico, with the result that the price rose in September 1917 as high as 55*d.* per ounce, as against a maximum of $27\frac{3}{4}$ in 1914, and the Secretary of State, though he was ready to pay a high price for supplies, found difficulty in obtaining his requirements.

In the course of 1918 the position was somewhat eased by an arrangement with the American Government by which 200,000,000 ounces of silver were supplied at $101\frac{1}{2}$ cents per fine ounce.

(2) The restrictions placed by different Governments on the export of gold prevented the normal flow of gold into India which had in ordinary times acted in relief of the demands on Government for silver.

To meet the deficiencies resulting from the dearth of silver and the absence of gold, currency notes were issued on a scale previously unknown in India, and as it was not possible to issue them except to a limited extent against metal, the issues had in the main to be against securities in India and in this country. The result of these issues has been that the percentage of the gold and silver reserve to the gross note circulation has fallen from 81·5 per cent. in July 1914 to 36·5 per cent. in May 1919, while the percentage of securities to the gross note circulation has risen from 18·5 in July 1914 to 63·5 in May 1919. During this period the gross circulation of notes has risen from 75,45 lakhs to 155,18 lakhs of rupees.

The policy of issuing notes uncovered by metal had to be watched throughout with caution as it involved a risk of inconvertibility.

5. These circumstances entailed a number of exceptional measures—

(1) The amount of Council drafts sold by the Secretary of State each week was limited from 20th December 1916, and from the 28th August 1917 onwards the rate for these drafts was raised by successive steps to correspond roughly to the bullion value of the rupee, until on the 13th May 1919 the rate reached 1*s.* 8*d.* for immediate telegraphic transfers.

(2) In order to restrict the fluctuations in the exchange market Council Bills have been sold from the 3rd January 1917 only to the chief exchange banks, and to a few important firms who had long been large purchasers. These banks and firms co-operated with Government by agreeing to transact business with other institutions and firms at rates laid down by the Secretary of State, and calculated to yield only an ordinary banking profit.

(3) Currency notes were issued for Rs. $2\frac{1}{2}$ and one rupee in December 1917 and January 1918 respectively. Previously the lowest denomination of note was Rs. 5.

(4) Special measures were taken to give the Government of India the greatest possible control over the import and export of precious metals. All gold imported into India had to be sold to the Government at a stated price, based on the exchange value of the rupee. (The present price is Rs. 12. $4\frac{1}{2}$ per 1*l.*) The export and import of silver on private account, and the melting of all coin were prohibited.

(5) The internal circulation of rupees has been limited as far as possible by administrative measures, *e.g.*, restriction of the cashing of notes at Treasuries, and the prohibition of transport of specie by rail and river steamer, or through the post. The result is that the use of the silver rupee as a medium of currency has greatly diminished.

It is relevant to mention that one of the difficulties in the way of issuing gold for currency in India results from the fact that the bullion value of the sovereign in an Indian bazaar is at the present time about 60 per cent. in excess of its exchange value. The effect of this premium on gold must naturally be to prevent its remaining as a circulating medium in the hands of the public.

6. The governing facts of the present position are as follows :—

(1) The legal ratio of Rs. 15 to 1*l.* has ceased to have any influence in determining the exchange value of the rupee. That value approximates to the rate at which Council drafts are sold from time to time.

(2) A large part of the silver received under the arrangements with the American Government is exhausted, and the control over the export of silver from America has been removed, with the result that the price of silver has risen from 49½*d.* per ounce when hostilities ceased in October last to 54¼*d.* per ounce on 23rd June 1919.

As one of the provisions of the Pittman Act[1] is that until the silver taken from the American Dollar Reserve is restored, the United States Treasury must buy at one dollar per fine ounce any silver of American origin tendered at that rate, an early reduction in the price of silver to anything like its pre-war figure is not to be expected.

(3) In June 1919 the American Government removed the embargo on the export of gold, and it may now be possible to reduce to some extent the demand for rupees by importing gold into India. The restrictions imposed on export by European Governments have not yet been removed.

7. Various possible lines of policy have been suggested. Broadly speaking, the possible schemes fall into two groups:—

(*a*) Those that aim at an early fixation of a stable rate for the exchange value of the rupee under the altered conditions, and

(*b*) Those that do not regard stability as possible under such uncertain conditions as now prevail, and that aim at a temporising policy until the situation is clearer. It will be noted that all schemes which have as their objective the introduction of a bimetallic standard or the reversion to a silver standard are ruled out by the terms of reference to the Committee.

8. As regards (*a*) the alternatives are—

(1) To endeavour to restore and maintain the statutory rate of 1*s.* 4*d.* for the rupee, or some other rate lower than the present rate, by the reduction of the amount of fine silver contained in the coin. In this event the machinery for the sale of Council drafts on India and reverse drafts on London might be maintained with or without modification on the general lines set forth at the beginning of this note.

The political consequences of the reduction of the fineness of the rupee and its effect on prices would require careful study; or

(2) To aim at the fixation of the exchange value of the rupee at some higher figure than 1*s.* 4*d.* In such a case it would be for consideration whether the Secretary of State should be advised to announce that he would abstain from buying silver when the price exceeds that which would enable him without loss to issue rupees at the exchange rate determined upon (*e.g.*, 53*d.* per standard ounce, if the exchange value of the rupee were fixed at 1*s.* 8*d.*). Under such a scheme it would be for consideration whether Council Bills should be offered for sale without limitation of amount to meet the demands of trade, or not. If the price of silver rose to a figure which made it impossible for the Government of India to issue rupees at the exchange rate agreed upon except at a loss, the additional currency issued in India would take the form of notes which, in so far as they could not be covered by gold, would have to be against securities either in India or in this country. It must not be overlooked that under such a scheme the Indian note might become inconvertible at an early date, in the absence of any large change in India's present balance of trade, and the consequences of inconvertibility would require to be carefully weighed.

As regards (*b*) the type of such a scheme would be one which subordinated the advantages of stability to the postponement so long as possible of the risks of inconvertibility.

If the price of silver showed a steady upward tendency, the rate for Council drafts would be raised from time to time to such extent as might prove necessary to prevent the exchange value of the rupee from being below its bullion value for any considerable period—though minor rises in the price of silver, which did not seem likely to endure, would be disregarded. The Secretary of State would buy silver whenever possible, only abstaining from the market for temporary reasons, *e.g.*, when China was a heavy purchaser.

[1] This is the name of the Act authorising the American Government to sell silver from its reserve to other Governments.

The question of stopping the purchase of silver under such a scheme would only be considered if the rise in exchange threatened to damage Indian trade in its widest aspects.

When the abnormal conditions now existing have passed away, the question of determining what should be the permanent exchange value of the rupee could be further considered.

A copy of the report of the Royal Commission on Indian Finance and Currency, 1914, is attached.

APPENDIX III.

Summary of Questions for Consideration of Witnssees.

The terms of reference to the Committee are as follows :—

> "To examine the effect of the war on the Indian Exchange and currency system and practice, and upon the position of the Indian note-issue, and to consider whether, in the light of this experience and of possible future variations in the price of silver, modifications of system or practice may be required ; to make recommendations as to such modifications, and generally as to the policy that should be pursued with a view to meeting the requirements of trade, to maintaining a satisfactory monetary circulation, and to ensuring a stable gold exchange standard."

It will be observed that this reference lays down the ensuring of a stable gold exchange standard as the object to be aimed at. It therefore excludes the consideration of a silver or bimetallic standard.

The principal points on which the Committee will desire to take evidence may be summarised as follows :—

I. What has been the effect upon Indian trade, external and internal, and on prices in India, of the measures rendered necessary by the war, viz. :—

(*a*) the restrictions on the import and export on private account of gold and silver ;

(*b*) the raising of the exchange value of the rupee to 1*s.* 5*d.*, 1*s.* 6*d.*, and 1*s.* 8*d.*, by successive steps ;

(*c*) the limitation of the sales of Council drafts ;

(*d*) the special arrangement for the sale of Council drafts to banks and firms on the approved list.

II.—(*a*) Is the maintenance of a fixed rate of exchange between the rupee and sterling a matter of cardinal importance for Indian trade ? What are the disadvantages of a varying rate of exchange, and to what extent can they be counteracted ?

(*b*) What is the probable course of Indian trade in the near future, especially as regards the balance between Exports and Imports ?

(*c*) What would be the effect upon Indian trade of a further rise in the exchange value of the rupee ?

III. If the gold price of siver should fall in the future, should exchange be fixed at the present rate or at some rate lower than the present rate ? If so, at what rate ?

IV. If there is a further rise in the gold price of silver :—

(*a*) Should the sterling rate of exchange for the rupee be raised further, so as to prevent the bullion value of the silver in the rupee from exceeding its exchange value ?

(*b*) If so, should there be any limit to such raising of the rate of exchange?

(*c*) Alternatively, should a rupee be coined containing a smaller weight of silver than the present rupee? What would be the result of coining and issuing such rupees?

(*d*) Should the Government of India continue to buy silver for conversion into rupees, whatever the price to which silver may rise?

(*e*) Should the Government of India continue to sell drafts on India freely, even though they may be unable to provide metallic currency to meet the demands for it and consequently may run the risk of making the note issue inconvertible, at any rate temporarily?

(*f*) If such drafts are not sold freely, should the present arrangements for their allotment be maintained, or modified?

V. What would be the effect of inconvertibility of the note issue (*a*) as regards the internal circulation and prices, (*b*) as regards external trade, (*c*) as regards the political situation in India?

VI. Is it desirable to maintain the existing restrictions, or any other restrictions, on the import and export of gold and silver, and on the melting of coin? Should endeavours be made to extend the use of gold as currency in India, and, generally, what use can and should be made of gold as an assistance in solving Indian currency difficulties?

VII. Are the present arrangements for the sale of Council drafts and Reverse drafts satisfactory? If not, what changes are desirable?

VIII. Are any changes desirable in the amount, constitution, location or employment of the Gold Standard Reserve and the Paper Currency Reserve?

The Witness is requested to furnish in advance a brief written statement summarising the evidence which he is prepared to give on any of the above points. He is invited to add any other matters which he considers relevant to the questions indicated by the reference.

APPENDIX IV.

Papers referred to in Evidence of Mr. F. T. Rowlatt, Governor of the National Bank of Egypt (*see* **p. 116 of Volume of Evidence**).

(1) DECREE REFERRED TO IN QUESTION 1301.

DECRET DU 2 AOÛT ÉTABLISSANT LE COURS FORCÉ DES BANKNOTES DE LA NATIONAL BANK OF EGYPT.

Nous Khédive d'Egypte;

Vu l'article 2 de notre décret du 25 juin 1898 instituant la National Bank of Egypt;

Considérant que les graves évènements qui bouleversent l'Europe ont leur répercussion en Egypte;

Que dans ces conditions, pour prévenir et conjurer une crise monétaire possible, il est indispensable et urgent de raffermir la situation financière du pays, en défendant le crédit public contre les spéculations illégales et les paniques injustifiées;

Considérant qu'à cet effet il y a lieu de maintenir autant que possible la circulation monétaire normale en empêchant l'accaparement et le retrait du numéraire et en maintenant la réserve d'or nécessaire pour la régularité de cette circulation ;

Considérant qu'il y aurait péril en la demeure ;

Sur la proposition de Notre Ministre des Finances et l'avis conforme de Notre Conseil des Ministres ;

DÉCRETONS :

Article premier.

Les billets (banknotes) de la National Bank of Egypt ont la même valeur effective que les espèces d'or ayant cours légal en Egypte. En conséquence et jusqu'à ce qu'il en soit ordonné autrement, tous paiements effectués au moyen des dits billets, pour quelque cause et valeur que ce soit, seront effectifs et libératoires au même titre que s'ils étaient faits en or, nonobstant toutes clauses ou convention contraire existantes ou à intervenir entre les intéressés.

Article 2.

La National Bank of Egypt est autorisée provisoirement et jusqu'à nouvel ordre à différer le remboursement des billets qui lui seront présentés à cet effet.

Article 3.

Nos Ministres des Finances et de la Justice sont chargés, chacun en ce qui le concerne, de l'exécution du présent décret qui entrera en vigueur à compter de sa publication au "Journal Officiel."

Fait à Alexandrie, le 10 Ramadan 1332 (2 Août 1914).

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(2) NOTICE REFERRED TO IN QUESTION 1307.

DÉCISION DU 30 OCTOBRE 1916.

MINISTÈRE DES FINANCES.

Il est porté à la connaissance du public qu'en vue, d'une part, de l'augmentation considérable que les besoins de la récolte cotonnière continuent à produire dans la demande des banknotes, et étant donné, d'autre part, l'opportunité de ne pas accumuler une réserve d'or au-delà des limites imposées par la prudence dans les circonstances actuelles ; il a été décidé de relâcher provisoirement, dans une certaine mesure, l'obligation pour la National Bank of Egypt de maintenir une encaisse or au moins égale à la moitié de l'émission.

La National Bank of Egypt a été autorisée à remplacer la partie de la réserve en or qui aurait été nécessaire pour porter cette réserve à la moitié du montant de l'émission en conformité de ses statuts par des Bons du trésor anglais à court terme.

APPENDIX V.

Note submitted by Mr. M. de P. Webb, C.I.E., C.B.E.

Preliminary.—Indian currency and exchange problems now need to be wholly reconsidered in view of :—

(1) The removal of the German menace to the peace and liberties of the world;
(2) The appalling national debts that have been incurred by Great Britain and other countries in effecting that removal;
(3) The huge volumes of paper currency that have been put into circulation during the process; and
(4) The present unprecedented high level of prices (*i.e.*, depreciation of the currency that has followed in the United Kingdom, in India and elsewhere.

Looking at the above conditions, I do not consider that a *gold currency* for India (which the Fowler Committee contemplated, which I long advocated, but which Government never carried out), is any longer necessary, either in the interest of India or of England. At the same time, I hold strongly that India should be allowed to import whatever gold the people may require and may be able to pay for.

I will now give my opinions briefly on the summary of questions which I have received from the Committee.

I. (*a*) The effect of the restrictions on the import and export on private account of gold and silver into and out of India has been to restrict *external* trade. I am not aware that *internal* trade has been much affected. A tendency towards lower prices would be expected, but this tendency was probably more than corrected by other causes.

I. (*b*) So far as *external* trade is concerned, the raising of the gold value of the rupee has inflicted unmerited losses on some exporters and undeserved profits on some importers, *so far as trade under negotiation or incompleted was concerned.* Sufficient time has not yet elapsed to judge the effects on the external trade of the future; but I do not think that the higher rate of exchange is likely to affect external trade *permanently.* So far as *internal* trade is concerned, the raising of the gold value of the rupee has tended to depress rupee prices in India. Other influences have corrected this tendency.

I. (*c*) Limiting sales of Council drafts has checked exports from India, and tended to depress rupee prices.

I. (*d*) I am not certain what "special arrangement" is referred to.

II. (*a*) It is very desirable, from the point of view of those engaged in the external trade of India, that fluctuations in sterling exchange should be confined to as small limits as possible, say about a farthing, and that the gold value of the rupee should be fixed as far as can be. Otherwise foreign trade tends to become a gamble in exchange. Before 1893 the Exchange Banks used to buy and sell "forward," and this to a large extent relieved the merchant; but the Banks bore the risk and, of course, charged for so doing in their rates.

II. (*b*) In the near future the external trade of India will probably increase, especially the export trade. This will mean a growing balance of trade in India's favour.

II. (*c*) A further rise in the gold value of the rupee might check exports and stimulate imports temporarily. I do not think that any permanent effects on exports and imports would be produced.

III. Looking to India's external liabilities *in sterling*, I do not think that the gold value of the rupee should be lowered, even if the gold price of silver fell considerably.

IV. Should there be a further *rise* in the gold value of silver above 53*d.*, then I am of opinion—

(*a*) That the gold exchange value of the rupee would have to be raised at once to protect India's silver currency from being exported or melted and sold as bullion.
(*b*) That there could be no limit to such a rise, except that made by the sterling price of silver. The gold exchange value of the rupee would have to follow silver.
(*c*) That such a situation could not be met by coining a rupee containing less silver than at present. The issue of such rupees would force the full weight silver currency out of circulation very quickly, and a very serious currency crisis would arise.
(*d*) That so long as the coining of new rupees is a matter at the discretion of Government only, and so long as the India Office considers it a part of its function freely to satisfy trade requirements for rupee currency by way of Councils, Government must continue to buy silver for conversion into rupees whatever the price may be, assuming that India demands rupees as a result of the trade balance in its favour.
(*e*) That Government is under no obligation whatever to sell drafts on India over and above the actual requirements of Government for its own purposes. No other Government, as far as I am aware, voluntarily assumes such obligations.

(*f*) That it would be best for the public to make its own arrangements to finance India's external trade and for Government to limit its sales of Council drafts to its own requirements.

V. If India's paper currency became inconvertible, even temporarily, the results would, in my opinion, be disastrous. I believe—

(*a*) That the internal circulation of money would be greatly checked and that prices would rise still further—from fear.

(*b*) That external trade would be very gravely checked, it being impossible to buy produce in large quantities for export with other than metallic currency.

(*c*) That, politically, Government's prestige would suffer a blow so serious that it might never recover.

VI. All restrictions on the import and export of gold and silver and the melting of coin should be removed as soon as possible by the Government of India. I do not consider it expedient at present to attempt to extend the use of gold as currency, but by permitting the unrestricted import of gold into India the foreign exchanges would be greatly relieved, and also the present currency difficulty.

VII. The present arrangements for selling Councils and Reverse Councils are satisfactory as far as I—a merchant—am concerned. *See* in this connection my views in IV. (*d*), (*e*), (*f*) above.

VIII. With regard to the amount, constitution, location, and employment of the Gold Standard Reserve and Paper Currency Reserve, I hold the following views :—

Gold Standard Reserve.—The amount need not exceed 30 million sterling. As things are at present, at least one-half of this sum should be held in gold, *in India*. The balance could be held in England in first-class securities. Any profits made on the rupee coinage over and above 30 millions sterling could now be taken into ordinary revenue.

Paper Currency Reserve.—The metallic reserve—silver and gold—should not at present fall below 50 per cent. of the total issue of the paper currency. This metallic reserve should be held *in India*, in coin as far as possible. The balance might be invested in first-class securities.

IX. I am of opinion that the currency difficulties of the Government of India during the war and at the present time have been augmented by the financial policy of Government. Thus, though Germany launched its attack on the world at large in August 1914, and though India was most closely involved, the Government of India omitted to raise any war taxation till 1916, whilst no Indian war loan was attempted till 1917! In the meantime India was disbursing enormous sums for military purposes to the debit of Great Britain. The direct results of these huge disbursements without any correspondingly increased collections of revenue were (*a*) a chronic shortage of ready cash to pay for exports—both war exports and private exports, and (*b*) an active stimulus—through fear—to the perhaps inevitable rise of prices.

Whatever the reasons may have been for the Government of India's decision to take no *financial* fighting part in the war till nearly two years after war started (and even then, to do very little, financially, compared with the magnitude of Government's disbursements), this policy has had an important bearing on the scarcity of rupees in India, and therefore on the remedies that can now be applied to correct that scarcity.

X. One of the first things to do is to try and get back some of the rupees that Government have been paying away in such enormous volumes. There are three chief ways of attempting this—additional Savings Bank facilities, more war taxation, and possibly more war borrowings. Indian War Loans from 1917 onwards have been worked in India with energy, though a very great and valuable attraction in the East has not yet been employed—I refer to Bonus Bonds. Indian war taxation has, in my opinion, been deplorably belated and inadequate, and ought, even now, to be increased. Indian Savings Banks could only be opened in the necessary numbers by Government, and I advocate, therefore, the immediate creation of an Indian State Bank, which would include, if possible, the three Presidency Banks, and which would open a branch in every town and district where there is any form of Treasury. Were the Savings Bank business pushed with energy, and in a business-like way—a matter of education and publicity—and with the prestige of Government behind it, I believe that many rupees which now disappear would be retrieved for the use of the State.

The other remedy for the scarcity of rupees is to give to India its fair due, *i.e.*, as many *new* rupees as may be required to liquidate the balance of trade in India's favour. The continued withholding of silver from India would be an outrage. In its present state of development India must have a large and continuous supply of new rupees. Its surplus products are its great source of strength. If the outside world wants to buy those products, it must pay for them. And what India at present demands in payment is mainly silver rupees. In fairness to India, therefore, it is clearly the duty of Government (who monopolise and control the manufacture of the currency) to arrange to supply the necessary rupees no matter what the sterling cost of the silver may be.

APPENDIX VI.

Heads of Evidence submitted by Mr. S. R. Bomanji.

I. What has been the effect upon Indian trade? external and internal, and on prices in India of the measures rendered necessary by the war, namely:—

(*a*) The restriction on the import and export on private account of gold and silver;

(*b*) The raising of the exchange value of the rupee to 1*s.* 5*d.*, 1*s.* 6*d.*, 1*s.* 8*d.* by successive stages;

(*c*) The limitation of the sales of Council Drafts;

(*d*) The special arrangement of the sale of Council Drafts to banks and firms on the approved list.

I.—(*a*) The result of the restriction on the import of gold and silver on private account has been to check the export of Indian products and to reduce their value in the internal markets.

(*b*) Owing to the world-wide demand for Indian staples and produce and the rise in the price of commodities in the world markets it has not been possible to measure accurately the effect due to the successive raising of exchange by these three stages. Under normal conditions a rise in exchange would have an adverse effect on exports.

(*c*) The limitations of the sales of Council Drafts prevented Indian traders generally from obtaining the full advantages of the rise in prices in foreign markets.

(*d*) The special arrangement for the sale of Council Drafts to banks and firms on the approved list has created a monopoly in favour of Exchange Banks and European firms who have made vast profits out of that monopoly. Had no such special arrangement been made these profits would have been shared by Indian traders. I advocate throwing open the sale of Council drafts to all applicants.

II.—(*a*) Is the maintenance of a fixed rate of exchange between the rupee and sterling a matter of cardinal importance for Indian trade? What are the disadvantages of a varying rate of exchange and to what extent can they be counteracted?

(*b*) What is the probable course of Indian trade in the near future especially as regards the balance of trade between exports and imports?

(*c*) What would be the effect upon Indian trade of a further rise in the exchange value of the rupee?

II.—(*a*) The maintenance of a fixed rate of exchange between the rupee and sterling is not a matter of cardinal importance for Indian trade, for India is a creditor country and is likely to remain so. The main reason put forward for a fixed rate of exchange in the past was that India was a debtor country. That reason has ceased to exist and is not likely to revive. The disadvantages of a varying rate of exchange consist in a further element of uncertainty for buyer and seller to take into account in fixing the price of forward sales of produce, the other elements being varying rates of freight and prices. I am not in favour of attempting to counteract by artificial means the disadvantages of a varying rate of exchange.

(*b*) Given normal monsoons, exports for the next two or three years will largely exceed imports in value, the reason being that manufacturers in Europe will be unable to supply goods freely.

(*c*) Ordinarily a further rise in the exchange value of the rupee would tend to diminish exports and stimulate imports, but whether in these abnormal times these effects would be produced, it is difficult to say.

III. If the gold price of silver should fall in the future, should exchange be fixed at the present rate or at some rate lower than the present rate? If so, at what rate?

III. If a rate is to be fixed it should be 1*s.* 6*d.* until the price of silver justifies a lower rate.

IV. If there is a further rise in the gold price of silver:—

(*a*) Should the sterling rate of exchange for the rupee be raised further, so as to prevent the bullion value of the silver in the rupee from exceeding its exchange value?

(*b*) If so, should there be any limit to such raising of the rate of exchange?

(*c*) Alternatively, should a rupee be coined containing a smaller weight of silver than the present rupee? What will be the result of coining and issuing of such rupees?

IV.—(*a*) Yes.

(*b*) No.

(*c*) No, to the first part of the question. The result of coining and issuing a rupee containing a smaller weight of silver than the present rupee would be a public loss of confidence in the coinage and a depreciation in the value of existing currency.

(*d*) Should the Government of India continue to buy silver for conversion into rupees whatever the price to which silver may rise ?

(*e*) Should the Government of India continue to sell drafts on India freely, even though they may be unable to provide metallic currency to meet the demands for it and consequently may run the risk of making the note issue inconvertible, at any rate temporarily ?

(*f*) If such drafts are not sold freely, should the present arrangements for the allotment be maintained or modified ?

(*d*) Yes.

(*e*) The India Council should sell drafts on India freely, fixing the rate by reference to what they have to pay for their silver purchases. No drafts should be sold unless covered by Government Treasury balances or gold and silver in process of coinage or in transit. I do not admit nor can I contemplate that Government would be unable to obtain sufficient silver or gold to meet the demand for metallic currency.

(*f*) The present arrangements should not be continued. See my answer to question I. (*d*).

V. What would be the effect of inconvertibility of the note issue ?

(*a*) As regards the internal circulation and the prices.

(*b*) As regards the external trade.

(*c*) As regards the political situation in India.

V.—(*a*) The effect of inconvertibility of the note issue would be the curtailment of the internal circulation both of rupees and note circulation; and prices would rise.

(*b*) External trade would suffer, for the cultivator would refuse to sell to the middle man except for silver or gold currency.

(*c*) The political situation would become far more strained.

VI. Is it desirable to maintain the existing restrictions or any other restrictions on the import and export of gold and silver and on the melting of coin ? Should endeavours be made to extend the use of gold as currency in India and generally what use can and should be made of gold as an assistance in solving Indian currency difficulties ?

VI. No restrictions should be maintained on the import and export of gold and silver and the melting of coin. In my opinion an open free gold mint should be established in India, and this would, I think, be the most successful solution of all currency and exchange difficulties Melting of coins is a habit inherited from times immemorial, and should not be interfered with. Every endeavour should be made to extend the use of gold as currency in India.

VII. Are the present arrangements for the sale of Council drafts and Reverse drafts satisfactory ? If not, what changes are desirable ?

VII. All Council drafts should be sold freely in the open market.

VIII. Are any changes desirable in the amount, constitution, location or employment, of the Gold Standard Reserve and the Paper Currency Reserve ?

VIII. The amount of the Gold Standard Reserve need not be over 25 to 30 millions, but in no case should it exceed 40 millions. The constitution of the Gold Standard Reserve should be liquid gold, and the location should be in India. In regard to the constitution and employment, the very object of a gold standard reserve, is to meet an emergency, *e.g.*, a drop in foreign exchange. This object must generally be defeated by investment in securities except to a small extent in Treasury Bills, for, unless the securities have risen largely in value, it would be impossible to obtain the investment price by immediate loan or sale. I would here draw attention to the drop in value, which has actually taken place, in securities in which Indian reserves have been invested. With regard to the location, I see no reason why there should be any difference between India and any other country with a gold reserve.

The Paper Currency Metallic Reserve should not be less than 70 per cent. of the paper issue, the constitution should be liquid gold or liquid silver with a larger proportion of gold. The location should be in India.

In reference to the request that I should give my views in regard to the general question of Indian currency I have to submit the following statement which should be taken as, *inter alia*, amplifying my answers to the specific questions put to me.

Memorandum by Mr. S. R. Bomanji.

I have gladly accepted the invitation to give evidence before the Indian Currency and Exchange Committee of 1919, presided over by you, Sir, as one who has been brought in touch with currency and exchange matters in dealings in both gold and silver, in shipments of cotton and wheat and seeds from India to Europe, America, China and Japan, and as an investor in securities in Great Britain, America, Canada, Australia and Japan. I am intimately associated with the shipping trade of India. I have chartered steamers on my account to different parts of the world. I am also intimately connected with the cotton mill industry of Bombay. I am a member of the Indian Merchants Chamber of Commerce of Bombay. I am a member of the Board of Directors of some of the Bombay cotton mills, and I am interested in the agencies of certain cotton spinning andweaving mills. I am on the Board of Directors of other industrial concerns in Bombay.

Since my arrival in this country I have come to know that the gold mint established last year in Bombay by Sir William Meyer, our late Finance Minister, has been closed by Sir James Meston, the present Finance Member. The people of India are not aware of the reasons which induced the Government of India to take this step. The people of India have always demanded a free gold mint. Even South Africa has been granted a free gold mint this year. It is essential for this Committee to fully investigate this subject, and to put before the public the reasons which led to the closing of the Bombay gold mint. If this present Committee does not go into this question there will be a great outcry in India.

It is better for India not to have a branch of the Royal Mint, coining sovereigns and half sovereigns, but to have an Indian gold mint which should adopt for its coinage a distinctive Indian gold coin and should be quite free from the British Treasury authorities, who have consistently interfered with the project of the establishment of an Indian gold mint.

India is expectantly looking forward to this Committee to make a thorough investigation into the system and method of purchasing silver for India by the India Office. The silver purchases for India have been criticised in financial and commercial circles in India by reason of the unbusinesslike and unmethodical way in which the business has been conducted, yielding enormous profits to intermediaries who have no interest in the welfare of India. To make matters clear, and perhaps to correct misunderstandings, this Committee might arrange for a detailed table to be published showing the annual average rate at which the British Royal Mint and the India Office have made their respective purchases of silver since the closing of the mints in 1893. The general impression is that the British Royal Mint have, on the average, made more economical purchases than the India Office. It is a matter of common knowledge that if the silver had been purchased for India every year in regular and reasonable quantities, India would not have been at the mercy of European and American silver operators. It is generally believed in India that the greater gulf created between the gold and silver ratio has been materially helped by the irregular and spasmodic method in which silver purchases have been made on account of India. India would advocate silver purchases to be effected in Bombay as it is the centre of the Indian silver trade.

This Committee might also go into the question of the import duty on silver which India would like to see abolished, as it is a tax on poor people whose only method of investment of their limited savings is in silver ornaments for themselves and their families. The abolition of the duty on silver would restore to India its previous position of a free silver market where all Asiatic markets, including China, which is a large buyer, could make their purchases. At present India regards the duty on silver as an undue advantage given to the London silver market. Were New York to become the leading silver market that advantage would be in favour of America.

I would suggest the establishment of numerous branches throughout India by Presidency Banks. The advantages of this step would be fourfold:—

I. Hoarding of coin and bullion would diminish
II. The necessity for coining large quantities of silver would disappear.
III. The circulation of paper currency would increase.
IV. Opportunities would be afforded to Indians to learn western methods of banking and to take higher appointments in the Presidency Banks and Exchange Banks. I would further suggest that the Banks of Bengal and Madras should have a strong body of Indian commercial men on their boards as has the Bank of Bombay.

As to question I. with regard to the special arrangements for the sale of Council drafts to banks and firms a very bad feeling has been created, as Indian firms, and merchants are debarred from competing or tendering for Council draft remittances.

As to question II. under a sound currency system based on a free gold mint like that in the United Kingdom, the United States, Japan and France, a fixed rate of exchange is not a matter of cardinal importance. When we had open silver mints, and sterling exchange fluctuated daily, Indian trade was steadily expanding under the influence of railway and irrigation development. Temporary varying rates of exchange are of no real disadvantage.

As to question III. if a rate of exchange is to be fixed, it should be fixed on a basis of 1*s.* 6*d.* accompanied by a free coinage of gold in India. Should the value of silver fall for a long period under 43*d.* per ounce, there is no reason why exchange should not be brought back to 1*s.* 4*d.* so that Indian industrial development might be encouraged. Under an open gold mint system there should be a fixed ratio between gold and silver, although temporarily exchange may break away to the silver point of the rupee if gold is not forthcoming in bulk. and exchange may rise as it has done in all creditor countries like the United States, Japan, Holland, Spain, the Scandinavian countries, and the South American republics. If gold is forthcoming in reasonable quantities there will be no appreciable melting of rupees, and if it does take place, it will hardly exceed a million a year.

As to question VI. free movements of gold and silver should never be restricted internally or externally. Such restrictions lead to secret movements of rupees, and unscrupulous parties have made enormous profits thereby. Temptation is put in the way of city and harbour police and subordinate staffs of railways and steamers. Secret melters are said to have made enormous fortunes in melting gold and silver. Melting in Indian States is allowed and British Indians are thus handicapped.

As to question VIII. should exchange go against India, she can easily borrow in this country. Throughout the war India was self-supporting, and did not, like the Dominions, seek any help from the British Treasury. In fact, we paid off our temporary debt in the shape of Indian Treasury Bills in London and bought about 100 millions worth of securities out of cash balances, Gold Standard Reserve and Paper Currency Reserve. In addition to this, India has given a free gift of about 130 million sterling to the British Government.

Indian people will acquire confidence in the paper currency if the major portion of the Paper Currency Reserve is kept in gold and silver and not in sterling securities, and is located in India. The present metallic backing is only 30 per cent., and it ought to be restored to its original level of about 70 per cent. No Council Bills should be sold against Paper Currency Reserve, as such sales result in a change of location of the Paper Currency Reserve. England and the United States keep all their reserves in their own countries, and India is entitled to do the same. Council Bills should be sold against Government Treasury balances in India, and against gold and silver in process of coinage or in transit. Any artificial or Government interference in the adjustment of the balance of trade of the country is not desirable, and must be left to the commercial and banking interests to find its solution.

APPENDIX VII.

Memorandum by Sir David Barbour, K.C.S.I., K.C.M.G.

The difficulties which are being experienced in connection with the Indian currency and exchange are due to the war.

The effect, direct and indirect, of the war has been to cause a large balance of indebtedness in favour of India.

The following figures show the net exports of merchandise on private account for each of the last six years :—

	£
1913–14	43,753,000
1914–15	29,108,000
1915–16	44,026,000
1916–17	60,843,000
1917–18	61,420,000
1918–19	56,540,000

In addition there were large disbursements by the Government of India for military purposes on behalf of the Home Government.

The amounts of these disbursements were as follows :—

	£
1916–17	38,391,000
1917–18	69,204,000
1918–19	100,883,000

These disbursements would, in the ordinary course, add to the balance of indebtedness in India's favour.

I believe India undertook to bear a portion of the general war expenditure, and this would reduce the total amount payable to India; there may also be other causes which would reduce the liability of the United Kingdom, but the general conclusion that there was a very large balance in India's favour seems beyond question.

A balance of this sort in favour of India must be settled in one way or another.

The ordinary method of settling it would be by exports of merchandise to India, but merchandise was not available, and if it had been India would probably not have accepted it,

as, owing to the conditions which prevail in that country, India prefers to take payment of any unusual balance in her favour by increasing her imports of the precious metals.

The balance could have been paid in gold, which was convertible into rupees at the fixed rate of exchange, but gold was not available as most countries had restricted or prohibited its export.

This condition of things tended to produce a rise in exchange which the Government of India could have obviated by selling a sufficient amount of bills, purchasing silver with the proceeds, coining the silver into rupees in India, and meeting the bills with the rupees thus obtained. But the demand for silver thus created was, in the peculiar position produced by the war, sufficient to raise the value of the silver contained in a rupee to more than its legal exchange value of 1*s.* 4*d.*

In the case of the United States, when there was a large balance in favour of that country the British Government borrowed in the United States, and so postponed the necessity of making immediate remittances, but such a course was not practicable to the full extent in the case of India.

It seems to me of great importance to recognise that the position in which we now are is due to altogether exceptional circumstances, and that the present conditions are very largely of a temporary nature. Any attempt to arrive at a final decision as to a permanent rate of exchange should be avoided as a change in conditions might render it impracticable to maintain that rate.

What seems to me the proper course is to fix the value of the rupee somewhat above its bullion value and to maintain that value as long as possible, only making a change when changing circumstances show it to be necessary to do so.

After a few years, when conditions become normal, it would be possible to fix a final and definite value for the rupee, which might be either 1*s.* 4*d.* or a somewhat higher rate.

Of course, great fluctuations in exchange are an evil, but what would have happened if India had had either a silver standard or a gold standard currency?

Silver has risen from about 27*d.* per oz. in 1913 to about 53*d.* at the present time, and has been as high as 58*d.* With a silver standard the fluctuations in the value of the rupee must have been greater than they have been under the present system. Consider the course of the exchange with China since the war began.

If India had had a gold currency there would not have been gold available to pay the large balance due to her, and the gold rupee would have risen in value as compared with the pound sterling, and it would have been brought home to people in this country that our gold standard is not above suspicion at the present time.

The standard of value in every country in the world has been violently disturbed by the great war through which we have passed, and every country must deal with its own difficulties as it best can until we return to normal conditions.

To any proposal to reduce the quantity of silver in the rupee or to issue inconvertible notes in India I am absolutely opposed.

Apart from other objections, one serious result from such a proceeding would be to increase the volume of the currency in India, at a time when the rise of prices and of wages and salaries in that country is creating great difficulties.

We know what the position in this country is as regards the course of prices and wages, and in this respect it will be a gain to India that the temporary rise in the exchange value of the rupee relieves her to some extent, though only partially, from excessive inflation.

The fundamental principle on which the gold standard in India was based was that silver rupees would only be issued in India at the rate of 15 rupees for the quantity of gold contained in a sovereign.

As a matter of convenience, however, it was arranged that instead of presenting gold at the Indian Mints persons wishing to obtain rupees might purchase drafts on India from the India Office at an appropriate rate of exchange.

This procedure was quite sound *so long as the "pound sterling" was freely exchangeable for gold and there was a free market in gold.* These conditions were not fulfilled in recent years, and we have been trying to maintain the old rate of exchange, not between the rupee and gold, but between the rupee and the "pound sterling" when the "pound sterling" had been practically divorced from gold.

The danger of this procedure will be understood more clearly if we consider what would have happened if the rupee had been linked to gold through the medium of the German mark at the rate of 20 marks to 15 rupees, and if an attempt had been made to maintain this rate during the last five years.

The rupee would simply have been enormously depreciated in purchasing power, there would have been an enormous rise in prices in India, and it would have been impossible to find currency for India except by excessive issues of inconvertible notes. Similar results, fortunately in a much less degree, have followed the attempt to maintain the old rate of exchange between the rupee and the "pound sterling," instead of between the rupee and "gold."

APPENDIX VIII.

Memorandum by Mr. J. F. N. Graham, Representative of the Glasgow Chamber of Commerce.

1. (*a*) *Q.* What has been the effect upon Indian trade of the restrictions on import and export of bullion?—*A.* Owing to important factors in no way associated with the Indian currency these restrictions have not had far-reaching effects.

(*b*) *Q.* What effect has the raising of the exchange value by successive steps had upon Indian trade?—*A.* The same answer applies.

(*c*) and (*d*) *Q.* The same answer applies to the limitation of the sales of Council drafts and any special arrangement connected with those sales.

2. *Q.* Is the maintenance of a fixed rate of exchange of cardinal importance to Indian trade?—*A.* No.

Q. What are the disadvantages of a varying rate of exchange and to what extent can they be counteracted?—*A.* There are no insuperable disadvantages, which cannot be almost entirely counteracted.

(*b*) *Q.* What is the probable course of Indian trade in the near future especially as regards the balance between exports and imports?—*A.* Present prospects point to the balance of trade continuing to run in favour of India.

(*c*) *Q.* What would be the effect upon Indian trade of a further rise in the exchange value of the rupee?—*A.* So long as no efforts are made on this side to curtail the issue of paper currency, and prices are consequently steadily rising, the rise in the value of the rupee should have little or no effect upon Indian trade.

3. *Q.* If the gold price of silver should fall in the future should exchange be fixed at the present rate or at some rate lower than the present rate? If so, what rate?—*A.* I am not in favour of fixing the rate of exchange, but if I were to make an exception, it would be in favour of the 1*s.* 4*d* basis, that for 25 years has been made successful.

(*a*) *Q.* If there is a further rise in the gold price of silver, should the exchange be also raised?—*A.* Yes.

(*b*) *Q.* Any limit to such raising?—*A.* No.

(*c*) *Q.* Should a rupee be coined containing a smaller weight of silver, and what would be the result of issuing such rupee?—*A.* Certainly not. The result would be general loss of confidence.

(*d*) *Q.* Should the Government of India continue to buy silver for coinage whatever the price to which silver may rise?—*A.* Whatever the price of silver the rupee currency should be systematically augmented.

(*e*) *Q.* Should the Government of India continue to sell drafts on India freely even though they may be unable to provide metallic currency to meet the demands for it and consequently may run the risk of making the note issue inconvertible, at any rate temporarily? —*A.* In my opinion Government should sell drafts for their Budget requirements, neither more nor less. I can hardly conceive circumstances under which they may be *unable* to provide metallic currency to meet the demands for it.

(*f*) *Q.* Should present arrangements for allotment of these drafts be maintained or modified?—*A.* I do not favour the restricted or selected allotments.

5. *Q.* What will be the effect of inconvertibility of the note issue?—

(*a*) As regards the internal circulation and prices?

(*b*) As regards external trade?

(*c*) As regards the political situation in India?

(*a*) *A.* I think rupee prices would rise and would continue to do so so long as the credit of the Indian Government was sufficient to prevent the inconvertible notes from going to a discount.

(*b*) I do not think the external trade would be affected.

(*c*) I am not in close enough touch with Indian opinion now to answer this question, but I do not think the effect would be good.

6. *Q.* Is it desirable to maintain restrictions on the import, export, and melting of coin? —*A.* I am in favour of abolishing all restrictions.

Q. Should endeavours be made to extend the use of gold as currency in India?—*A.* No, a gold currency has been proved unsuitable for India and special endeavours to extend its use without establishing a gold currency are futile.

7. I am not aware that any change is desirable in the manipulation of Council drafts.

8. Until the value of the rupee rises above the intrinsic value of the silver contained in it, there is no profit in coining rupees, and the Gold Standard Reserve to a great extent becomes inoperative.

Note upon the restrictions upon imports and exports of bullion in India.

The result of these restrictions has been a falling off in the import of gold from an average of 16 millions sterling ten years ago to practically the vanishing point, *i.e.*, in 1918–19, 20,000*l*. Consequently the rupee price of the sovereign in India has advanced to about Rs. 20, its intrinsic value being at the present rate of exchange about Rs. 12. This means that gold is out of reach of the native and there has been a rush to get silver to take its place.

From an average of 7⅔rds crores in 1909–14 the absorption of rupees has advanced to 18 crores in 1914–19, 1918–19 alone totalling 45 crores. I should like to put in copy of a letter[1] from the Hon. W. Erskine Crum, Chairman of the Bengal Chamber bearing on this point.

I believe that if some of the gold at present held in Europe and America is released and allowed to be exported to India, the rupee price of gold in the bazaar will drop heavily at once and slowly return to its correct value at current exchange. The free importation of gold should bring out hoards of rupees to the value of the gold absorbed which will automatically tend to curtail the demand for further supplies of the white metal.

There are already signs that the output from the silver mines of the world is recovering from the effects of the war, and if no artificial restrictions are placed upon that output, or its marketing facilities, there need in my opinion be no apprehension of its advancing upwards to any great extent. The tendency is much more likely to be downward.

It may be argued that if the free shipment of gold to India is allowed the absorption will be so large as to become a menace to the whole world, but the balance of trade in favour of India is mainly due to the consumption by other countries of India's production. Those productions must be paid for and any surplus of her imports made good in gold. It is only reasonable that that gold should come from the countries in India's debt, and if they can ill afford to spare it owing to the strain on their credit systems, surely it is these credit systems that must first be examined before India gets the blame for securing what is only her right.

The present abnormal rise in prices is greatly due to these credit systems and to the large issue of paper currency by the countries enjoying a gold standard. An increase in the world's gold output depreciates the standard and sends up prices. In the same way, if the gold output is artificially augmented by the issue of large amounts of paper money (standing on the credit of the Governments issuing it) it is to be expected that prices will follow the same rule.

In conclusion it is worthy of note that throughout the whole Report of the Indian Industrial Commission, there is no reference to exchange, the value of the rupee, or the trade in gold and silver.

APPENDIX IX.

Memorandum by Sir Edward Rosling, representing the Ceylon Association.

The currency conditions obtaining in Ceylon are governed by the conditions in India.

Her currency consists of the Indian rupee, and her own subsidiary coinage, viz., 50, 25, and 10 cent pieces in silver, and copper and nickel small coinage, and Government notes of Rs. 1 and 2, and larger denominations.

Ceylon is an agricultural country, and her exports almost entirely consist of agricultural produce such as tea, rubber, the produce of the cocoanut, &c., which is shipped to gold currency or gold exchange countries. On the other hand, a large amount of her imports consist of imports of foodstuffs from India.

In 1903 the sovereign was made legal tender at the rate of 15 rupees to the pound sterling, but in order to safeguard the rupees in the Treasury, a limit of 200,000*l*. in gold was placed on the amount the Treasury might hold.

Ceylon is supplied with rupees from India by imports made by the banks, and these rupees largely flow back to India as the personal property of natives returning to India to purchase foodstuffs or other requirements.

The banks recoup themselves by charging a higher rate for sterling exchange than the rates ruling in Bombay and Calcutta.

A certain amount of the Ceylon export trade is financed through India by the large imports of rice from that country.

Since the war I understand rupees are practically never seen in Ceylon, the whole internal trade of the country being carried on by cheques, currency notes, and subsidiary coinage.

Sovereigns were used as currency to a limited extent in Colombo, and possibly in the larger towns, but up country they were generally converted into jewellery.

Replies to questions on Sheet B.[2] issued by the Indian Currency Committee. These replies are based on a strong belief that the exchange value of the rupee should be brought

[1] Evidence, p. 150.

[2] *See* p. 41.

back to 1*s.* 4*d.*, and that the circulating currency as such should not be usable for settling the trade balances in favour of or against India :—

I.—(*a*) The only effect on Ceylon trade of the restriction on the import and export on private account of gold and silver is through the effects it has on the India bank resources, and a possible tendency to restrict imports into Ceylon from India.

(*b*) The raising of the exchange value of the rupee in practice raises the cost of production for the produce that is shipped to gold currency countries, or else reduces its selling value when sold locally for shipment to gold currency countries.

In the case of English companies growing tea, rubber, &c., and selling their produce in London, a 1*s.* 8*d.* rupee means an increase in the cost f.o.b. of nearly 25 per cent.

In the case of local owners selling in Colombo there is an equivalent reduction in the currency price. In the case of tea it has increased the cost by about $1\frac{3}{4}d.$, and in the case of rubber by $2\frac{1}{4}d.$

(*c*) The limitation of the sales of Council bills has at times reduced the banks' resources to such an extent that they could only finance the bare cost of production of such products as are grown for export, so that local buyers could only pay the sellers cash up to an estimated cost of production, the balance being paid in demand drafts on London, which were unsaleable in Ceylon.

(*d*) I do not think the special arrangements for sales of Council bills in itself affected trade generally in Ceylon ; it was the shortage that was the crucial point.

II.—(*a*) The maintenance of a fixed rate of exchange is desirable in that it gives a greater stability to all dealings between Ceylon and her chief markets, also to the capital value of investments made in Ceylon by companies and individuals domiciled in a gold currency or exchange country.

The drawback to a varying exchange is that it makes forward dealings very difficult, if not impossible, and it adds to ordinary market fluctuations of value a second series of fluctuations that largely increase the speculation attending all trade transactions.

(*b*) A still further tendency to increase exports over imports.

(*c*) The tendency to increase imports and discourage exports ; it would have a disastrous effect on those producing companies that are at present working on a small margin of profit.

III.—So long as the present system is in force, viz., the rupee itself is used as the chief item of currency, I do not see how it is possible to fix exchange with any degree of certainty apart from the market value of silver.

IV.—(*a*) and (*b*) As it is impossible to say what silver may eventually sell at, so is it impossible to say you will fix a rate that will prevent the bullion value of silver in the rupee exceeding its exchange value. It would appear as if any such attempt would result in the establishing of a sliding scale of exchange with no maximum, but a minimum of 1*s.* 4*d.*

(*c*) I don't like the idea of tampering with the present rupee, as I think it would create suspicion and distrust in the mind of the native, who regards the rupee as the real standard of money. If a circulation of metallic currency is considered unavoidable, I would rather see a nickel rupee that would be openly and obviously a token.

(*d*) I am of opinion that the Government should not purchase silver at a higher price than will cover the cost of issuing a rupee at the exchange value of 1*s.* 4*d.*

(*e*) That the Government should sell drafts freely, say a limited amount to be paid in silver, and an unlimited amount to be paid in paper currency.

(*f*) Once the above course of selling drafts is decided on it should be persevered with.

V.—So far as Ceylon is concerned, I do not think there would be any ill results, provided Indian and Ceylon currency notes were made good tender in each country.

VI.—A free import of both gold and silver should be permitted in order to allow of the settlement of trade balances.

VII.—No remarks.

VIII.—No remarks.

APPENDIX X.

Memorandum submitted by Representatives of Eastern Exchange Banks Association.

With regard to the main "Terms of Reference," we consider that a return to a more normal condition of affairs should be awaited before contemplating any fundamental change from basic principles, as the experience of the last few years, owing to the artificial conditions existing, in our opinion, forms no just reason whatever for any drastic action seeking as its object permanent change. What is required is a temporary policy which will, if possible, secure for the time being a stable rate of exchange most suitable to India's requirements, and so remove the uncertainty which at present exists and which has been and still remains the cause of the present unsatisfactory position.

Having this in view, we are of opinion that every endeavour should be made to make available for the purpose of India's trade as much gold as can be conveniently spared, as it seems quite evident that the stability desired can never be arrived at by the constant raising of the price of silver, when no corresponding increase is brought about in the quantity of the metal available: such procedure can never bring finality.

With these remarks we proceed to reply briefly to the questions set in paper "B"[1]:—

Question I.—This could best be answered as regards the internal trade by those who have had daily experience of conditions ruling in India during the period of war. As regards the export trade, the effects of (*a*), (*b*), and (*c*) thereupon have tended not only to cramp and restrict it, but to surround it with such a state of uncertainty as to be detrimental to the best interests of the country. As regards (*d*), this seems hardly worthy of consideration, particularly as the amount fixed was totally inadequate for trade purposes.

Question II.—(*a*) The great desideratum to aim at is a stable rate of exchange; a varying rate of exchange means uncertainty, and uncertainty kills trade.

(*b*) The probable course of Indian trade in the near future is towards further expansion, with the inevitable result that the balance of trade will more than ever move in India's favour, particularly having regard to the high prices of produce and to the coming industrial development of India.

(*c*) A great blow to her export trade as it would jeopardise the selling power of all her produce which was on a competitive basis, and also severely handicap her new industrial development.

Question III.—This question is best answered in the preamble to this letter, wherein we state that a stable exchange is the main point to aim at.

Question IV.—(*a*) and (*b*) Pending return to normal conditions, it would be advisable, so as to prevent further dislocation to business, to allow the present external parity of 1*s.* 8*d.* to remain in force.

(*c*) Such a suggestion as herein contained should not, in our opinion, be further discussed, as its immediate result would be the total disappearance of the present stock of rupee coins in India, and the political side of such an alteration would be a very serious problem to contemplate.

(*d*) No! There would be no finality in such a measure.

(*e*) The position of trade in India to-day demands that the Government of India should sell drafts freely on India.

(*f*) In any case, the present arrangements should continue until a return to normal conditions.

Question V.—The probable result of inconvertibility would be:—

(*a*) Prices to increase. The effect on the internal circulation might be to cause withdrawal of rupees, though the favour extended to the note issue of late would indicate that withdrawals would not be so drastic as imagined.

(*b*) The external trade would not be slow to adapt itself to such conditions.

(*c*) Those in touch with to-day's Indian opinion better able to answer this.

Question VI.—(1) The import of gold should be facilitated.

(2) The present restrictions on silver imports should be withdrawn and the import duty abolished.

(3) This should be dealt with by Government in their discretion.

Question VII.—Quite satisfactory.

Question VIII.—Such matters should be left for discussion until a future occasion.

APPENDIX XI.

Memorandum by Sir William Meyer, G.C.I.E., K.C.S.I.

1. In view of my late official position I have been favoured by the Secretary with copies of the Government of India's Statement of Case, of Sir L. Abrahams' Memoranda A[2]. and B.[3] with their Appendices, and of Mr. Lucas's Memorandum C.[4] And I propose to give my general views before answering the specific questions put in Paper B.[1] addressed to the Committee's witnesses.

2. The main issue before the Committee is whether stability of exchange or the maintenance of inconvertibility in respect of the Indian note issues is the more important. The Government of India as at present constituted regard exchange stability as so desirable that they are prepared to purchase it if necessary by inconvertibility, a contingency which they appear to view in a somewhat airy way, as shown by their telegram of 14th April. I adhere to the views expressed by the Government of India while I held office as Finance Member, and endorsed by Mr. Gubbay as Controller of Currency, as to the very serious consequences which inconvertibility will bring about. The representations then made were

[1] *See* p. 41. [2] Evidence p. 1. [3] Evidence p. 60. [4] *See* below p. 87.

necessarily coloured by war conditions, but in any case the effects of inconvertibility seem to me very serious. You are dealing with an ignorant and suspicious population, which, as recent events in connection with the Rowlatt Act have shown, is very easily worked on by exaggeration and unscrupulous statements. What happier field could you give to agitators and seditionists than to allow them the chance of telling the people that the Government notes are mere "scraps of paper"; that the undertaking printed thereon that they shall be convertible on demand at a Currency centre has been falsified; and that the next step will obviously be repudiation of the Government debt, in which the small investor is now materially interested, and the confiscation of the Government savings banks deposits? At any rate (they will say), you paid largely in rupees for the deposits and debt holdings. You will now at best get repayment in depreciated paper. And the efforts of seditionists in these directions would be seconded by Marwaris and other unscrupulous speculators, whose object it would be to frighten people into selling their notes cheaply. We had evidence of this kind of thing during the temporary panic at the beginning of the war, and in some instances in connection with Government cash certificates. Politically, the greatest potential danger to our rule in India is discontent on the part of the native army and the armed police. Inconvertibility would provide an admirable leverage (from a seditionist point of view) for bringing this about. It could also be used to produce serious trouble among mill hands in the great manufacturing centres.

3. I gather, indeed, from the Government of India telegram[1] of 7th May, printed with Sir L. Abrahams' Memo. B., that they held that the then existing political situation "has made further talk about inconvertibility for the present impossible." What is to prevent a similar situation arising at a time when, under the Government of India's scheme, inconvertibility would be necessary to meet a situation caused by large Council drawings and the cessation of silver purchases? And, as I have already indicated, even if there were no such initial difficulties, a declaration of inconvertibility would speedily provoke them.

4. So much for the political aspect of the case, which is to my mind most important.

The economic results of inconvertibility would be deplorable also. I agree with Sir L. Abrahams (paras. 13 and 14 of his Memo. B.[2]) that the brakes on inconvertibility on which the Government of India relied in their telegram of 14th April would not work, and would indeed aggravate rather than alleviate the situation. The announcement that the Secretary of State was going to abstain from purchases of silver above a fixed price might, for the time being, keep silver down a little, but in present circumstances it would not permanently frighten the silver market, in view of the demands from other sources, *e.g.*, to replace the depletion of the American Currency Reserve under the Pittman Act.

5. Nor can I appreciate the Government of India's view, that once you had declared inconvertibility you could readily retrace your steps if the silver position improved. Resumption of specie payments would, in these circumstances, be attended by a rush for encashment of notes to ensure against the next dose of inconvertibility which would be anticipated. Faith in the note issue would have been intensely shaken, and confidence would be very difficult to restore.

I agree further with Sir L. Abrahams that inconvertibility having once been declared could not be departed from, at any rate, for many years. Supposing, however, that you could adopt an "in and out" policy *qua* inconvertibility as the Government of India imagine, you would have constant instability in regard to the ratio between rupees and paper money. The latter would be at a discount in the inconvertibility period, which would tend to disappear when convertibility conditions applied.

The Government of India are greatly concerned about the instability of external exchange, but the instability of the internal currency media which they contemplate is surely a much graver evil.

6. Assuming, then, that inconvertibility if adopted would have to continue for at any rate a lengthy period, the economic results would obviously be serious depreciation of the paper currency as compared with the metallic rupee (even the limitation of encashment in 1918 to the obligatory currency centres brought about some tendency to this), and eventually the hoarding and melting of rupees, for, though you may prohibit melting, prohibition would be very difficult to enforce. You would then get to the disappearance from circulation of the "King's rupee," described by the Government of India, in para. 5 of their telegram of 14th April, as "the symbol of British rule firm rooted in the habits and feelings of the Indian people." Small silver coin would also be hoarded, as happened for instance at Simla during the currency crisis of 1918, when rupees were scarce there. Depreciation of the paper currency would cause a rise in prices, which would aggravate internal discontent and react prejudicially on India's foreign trade. There is also the danger, always present in countries in which the paper currency is inconvertible, that the Government when it found itself in a position of temporary embarrassment would be tempted to issue fresh uncovered notes, and thus debase the paper currency still further.

7. I am not convinced by the argument of the Government of India that inconvertibility would work more smoothly because the people are becoming used to small notes and certain crops have been largely financed by paper issues. That is all to the good, and the popularisation of the note issue was a feature of my Finance Membership in which I think I

[1] *See* Evidence, p. 78.

[2] *See* Evidence, p. 66.

may take legitimate pride. But it rests, *au fond*, on the belief that notes will be redeemed when presented at the proper places; take away such redemption and the confidence in the note issue is fatally impaired.

8. Nor do I think it is a valid argument that because we have, under stress of war and inability to supplement the silver stocks by gold imports, restricted the encashment of notes to currency centres, we have already made material strides towards inconvertibility. The facilities for encashment of notes at district treasuries, which did much during the greater part of the war to enhance confidence in the note circulation, were avowedly a matter of grace and not of right. It was unfortunate that we were obliged later to restrict ourselves to our legal obligation to encash at currency centres, but so long as this remains the paper currency *is* convertible.

9. So, too, with the restrictions which had to be placed upon private transport of specie in India and the limitation of the Secretary of State's Council drawings. These were special measures necessary to cope with abnormal conditions set up by the war. I agree with what I understand to be the Government of India's views that it would be very undesirable to continue these latter restrictions indefinitely, and I see no reason why they should not be done away with, without inconvertibility, if the Secretary of State continues to purchase as much silver as he can in satisfaction of India's requirements, *and* if such purchases are buttressed, as they were in the years before the war, by considerable imports of gold, which ought to be available in view of the large stocks held by America, to say nothing of Spain and Scandinavia, and fresh mine supplies which will be coming in.

I read with surprise, therefore, the statement in the Government of India telegram[1] of 14th April that "further imports of gold are not desired by us," and with corresponding satisfaction the better considered view expressed in para. 19[2] of their Statement of Case.

10. I, too, think that it is important that there should be a large stock of gold, held partly in India, in the Gold Standard Reserve, and that—for the present, at any rate—gold sent to India on private account should be made over to Government. I also consider that the Secretary of State must be ready to purchase and send out gold on Government account. But the policy of reserving the gold to Government should not preclude the buttressing of silver supplies and stocks by the letting loose of gold in India—primarily, so long as the sovereign has a scarcity value in the bazaars, by the sale of gold bullion at market rates. If and when the scarcity value of the sovereign, which is due largely to the stoppage of gold supplies, disappears, I would not hesitate to encourage the use of sovereigns as currency, especially in areas in which before the war this medium was becoming popular.

And I would keep on the Bombay Gold Mint, as affording, at any rate, a sentimental gratification to Indian feeling, and as being very useful should circumstances arise calling for the rapid coinage of gold bullion. I may observe here that the "wasteful" issue of sovereigns in 1918, referred to in para. 8[3] of the Government of India's Statement of Case, was, I hold, justified as a temporary measure to supplement what was then a most dangerous deficiency of rupees till we could get fresh supplies of the latter.

11. I may say, too, that I do not understand the remark in para. 6 of the Government of India telegram[1] of 14th April, that India is saturated with over-valued rupees. A currency purist might have applied this criticism to the state of things before the war, when the bullion value of the rupee was much below its currency and exchange value, but it certainly eannot apply at present, when the latter is, if anything, lower than bullion value.

12. The Government of India's proposals are evidently dictated by what they describe at the outset of their telegram[1] of 14th April as the cardinal issue of how to secure the stability of the rupee in terms of the sovereign. Stability of exchange is of course, *per se*, a very good thing, but it can be far too dearly purchased, to my mind, at the cost of inconvertibility. After all, as Sir L. Abrahams justly observes, the fluctuations of exchange prior to 1893 did not preclude a large expansion of Indian trade, so much so that the closure of the mints was opposed by important producing and mercantile interests. What really justified the closure was the intolerable position to which the Government was exposed, in respect to its Home charges and consequent budgetary position, by the oscillations and constant net fall of rupee exchange. And as the Government of India, with whom I am heartily in agreement here, do not propose to re-open the Mints, with the result that the Government will continue to "manage" the currency, we have only to look at the general effect, on this basis, of a rupee which has already risen greatly in exchange value, and which may continue to rise. An enhanced rupee value is obviously a gain to the Indian community as represented by the Government, since it diminishes the burden of India's Home charges—a matter of enhanced importance now that these charges are likely to be raised by an increase of leave and pension allowances, and in military expenditure. The enhanced rupee value is also to the advantage of those who have to obtain articles from abroad. *Primâ facie*, it is to the disadvantage of those interested in export production and trade in respect of articles in which India has not a practical monopoly; but in present circumstances this is counteracted by the great demand there is likely to be for some years to come for India's products, and the increasing cost of production elsewhere. So that the point may be put thus—that with rising exchange the exporter will not gain as much as he might have done otherwise, but will in

[1] *See* Evidence, p, 76. [2] *See* above, p. 8. [3] *See* above, p. 5.

present circumstances do quite well. This is evidenced by the fact that the rise of the rupee from 1*s.* 4*d.* to 1*s.* 5*d.* and 1*s.* 6*d.* was concomitant with large export from India, and that, as shown in the Government of India's telegram[1] of 12th June last, the further rise to 1*s.* 8*d.* has not hitherto prejudiced the exporter. The Government of India say that this is due to existence of abnormal conditions counteracting the operation of ordinary economic conditions, but I think that such counteraction is likely to continue for a considerable period.

13. As to the inconveniences to bankers and merchants caused by the fluctuating rupee, this seems to me quite secondary in comparison with the graver issues involved, and there are ways, as Sir L. Abrahams suggested in para. 10(*b*) of his Memorandum B., in which they can be mitigated.

14. A time may, of course, come, as Sir L. Abrahams has suggested, when a reinstatement of normal conditions, coupled with a high and perhaps increasing exchange value of the rupee, would, *per se*, be gravely detrimental to Indian trade, but that can be considered if and when such a tendency shows itself, and with reference to the then existing situation and the relative merits or demerits of other schemes, which may lead to inconvertibility. With all respect to the present Committee it seems to me quite impossible that they should be able, as the Government of India would like them to do, to scan the future with sufficient confidence to lay down a definite, stable and expedient ratio between the rupee and the sovereign, to be maintained if necessary at the cost of inconvertibility. In currency as in other matters we are still in a storm-tossed ocean, and know not as yet what *terra firma* we shall eventually reach, and when. It has also to be remembered that by the solemn declaration of His Majesty's Government India is to move gradually to self-government within the Empire, and that is an additional argument against committing ourselves without absolute necessity to a permanent future policy which might not be in accord with Indian sentiment.

15. It seems to me far better, therefore, to regard the present as a provisional period during which we should continue to follow the main lines of the present policy in regard to exchange, under which the rate is fixed by the Secretary of State in consultation with the Government of India, while a rate once notified should remain in force until silver prices and the necessity for obtaining sufficient supplies make it necessary to raise it so as to obviate a supply of rupees at materially less than their cost price. But if you have to make an increase in the silver value of the rupee I would make a pretty steep step, say 2*d.*, in the hope of postponing any further increase for a considerable time, and to avoid constant tampering with the ratio between gold and silver in India. I may add that at particular periods the Secretary of State might, as a matter of expediency, temporarily stand out of the silver market, provided that such abstinence does not risk inconvertibility.

16. Under this system it would be advisable to withdraw the present limitation on the amount of Council Bills offered weekly by the Secretary of State, and the distribution of these among privileged applicants, who are expected to abstain from making special profit out of their position. These conditions hamper trade, and the latter will become increasingly difficult to enforce as the stimulus of patriotic altruism inspired by the war dies away. But it is essential, if the Secretary of State is to increase his Council Drafts, that, in order to avoid steering straight for inconvertibility, fresh acquisition of silver should be supplemented, as in the pre-war period, by considerable supplies of gold, a matter in regard to which Sir L. Abrahams' proposals do not seem to me clear. I agree generally with what Mr. Lucas says on this matter, that India has a right to receive payment for her dues in gold as well as in silver, and it would be most mischievous, and quite inconsistent with the declared policy of India's future status within the Empire, to force her to inconvertibility by denying her gold supplies. But I agree with Mr. Lucas that, to prevent such gold supplies from being frittered away, it would be necessary, for the present at any rate, to make Government the sole recipient of gold sent to India.

I also agree with him that the internal ratio of the sovereign and the rupee must be determined by the rate of external exchange for the time being prescribed; but obviously this is an argument against raising the exchange rate without very strong reason, and also against niggling increases.

17. The position would then be that the Secretary of State would normally sell Councils at the rate of exchange fixed for the time being, which we may call x, in sufficient quantities to meet the trade demands, and that to make such a position possible without risking inconvertibility, he must be prepared to purchase silver freely at a price corresponding roughly with the x value of the rupee, and at the same time, as already stated, to acquire gold and send it out to India. Private persons should likewise be allowed to procure gold to send out to India, provided that on arrival there it should be made over to Government at a price fixed with reference to the x value of the rupee, and making due allowance for the cost of remittance in the wide sense of the term.

18. For the present I would maintain the existing prohibition of the export of silver and the melting of King's coin, though I doubt whether the latter condition can be drastically enforced in practice. These prohibitions are obviously desirable to meet a situation in which the bullion value of the rupee may for the time being be somewhat in excess of its fixed exchange value, and to protect existing stocks from depletion.

[1] *See* Evidence, p. 79.

Prohibition of private importation of silver was justified when imposed as a preventive against the price being raised against the Secretary of State, and *per se* that consideration still applies. But on the other hand, and especially if you are to try to enforce the prohibition against melting rupees, you must allow India to obtain silver for industrial and social purposes, and it is possible too that some silver might be obtained by private agency which the Secretary of State might be unable to get hold of. I would therefore allow private importation, subject to the proviso that the Government might in emergency take over silver imports at a fixed price as in the case of gold.

I have already dealt with the importation of gold. Gold export on private account should not be allowed, as diminishing a stock which it is most desirable to conserve and increase.

19. The present restriction on the internal conveyance of specie in India should be done away with, provided an adequate supply of silver *and gold* from outside is obtained; but for some time to come it will, I think, be necessary to abide by the existing policy of limiting the encashment of notes (generally speaking) to currency centres, at which only the Government is legally liable to redeem them.

20. If under this system the demand for Councils was such that it seemed that the Government of India would not be able to meet it without dangerous depletion of stocks, and that the supply of fresh specie which the Secretary of State could at the time obtain for them by the acquisition of silver at a price consonant with the existing x value of the rupee, supplemented by gold acquisition, would not obviate the danger, but that more silver could be procured by offering a higher price for it, this should be done, and the x value of the rupee raised accordingly, subject as regards this last remark to the proviso at the beginning of para. 14. But what seemed to be a very temporary shortage of stocks might be met, as suggested by Sir L. Abrahams, by restricting the Secretary of State's Council drawings for the time being, drafts being sold during that special period at competitive rates.

21. With reference to my remark above—"but more silver could be procured by offering a higher price for it," such price must obviously connote an increase in the dollar price, which would get us more silver in America, now the pivot of the silver situation. It would be futile to raise the exchange value of the rupee with reference merely to the vagaries of the sterling-dollar exchange. The sterling value of the rupee should, I suggest, be fixed with reference to the dollar price of silver converted at the normal sterling-dollar parity, and in so far as the pound sterling was for the time being depreciated in terms of dollars, the loss on silver purchases should, I think, be borne by the Indian Government. It could well afford to do this, having regard to what it will have made and be making on its Home revenue and capital charges by reason of the soaring of the rupee above 1*s.* 4*d.* The justification of this proposal is, in short, that you should not disturb exchange and trade conditions by a further rise in the x value of the rupee when you get no countervailing advantage in the shape of increased silver supplies.

22. Everything should, of course, be done to stimulate the note circulation.

23. The x rate, once arrived at, should be maintained, subject to the proviso at the beginning of para. 14, even though the price of silver should subsequently fall. In such circumstances as can at present be foreseen, this could be done as readily as was the case with reference to the artificial exchange value maintained for many years *quâ* the 1*s.* 4*d.* rupee.

24. Temporary "sagging" of the actual rupee sterling rates as compared with the prescribed x rate, which would be gauged first by a heavy drop in demand for the Secretary of State's Councils, and ultimately by a fall in the Bank selling rates in India, should be dealt with by the Secretary of State cutting down, and if necessary altogether suspending, his drawings, and by the free issue of Reverse Councils by the Government of India at a rate (say) of one-eighth of a penny below x. Indeed, I would go further and permit the Government of India, for the convenience of those who have remittances to make from India and to increase their own resources, to sell Reverse Councils at any time, provided the rate fixed was such as to be appreciably lower (say, again, one-eighth of a penny) than the normal parity, so as not to give undue encouragement to this form of remittance.

25. I agree with the view suggested by Mr. Howard (para. 21, Appendix D. of Government of India's Statement of Case[1]) that the silver 8-anna coin, which is relatively more wasteful to produce than a full rupee, should cease to be unlimited tender. It might be replaced by a nickel coin, as has been already proposed, I understand, in respect of the silver 4-anna piece.

26. A matter which requires to be dealt with as soon as possible in order to put the currency resources on a more satisfactory footing, is the reduction of the huge proportion of the Paper Currency Reserve which, under special war conditions, was temporarily invested in British Treasury Bills as a substitute for gold, and the consequent strengthening of specie holdings. I agree with Mr. Howard (Appendix D. of Government of India's Statement of

[1] *See* p. 29 *supra*.

Case) that in normal conditions the investible portion of the Currency Reserve might hereafter be fixed at a figure not exceeding 50 per cent of the gross circulation as determined year by year by the average of the circulation of the three 31sts of March preceding. On Mr. Howard's figures, this would have given us for the current official year an investment quota of 56½ crores against about 98½ now invested. A percentage investment provision is far more desirable than the present system, under which definite cash figures are prescribed, any modification of which requires *ad hoc* legislation.

27. As to the distribution of the invested portion, I agree with Mr. Howard that the amount sunk in regular rupee securities must be regarded as a really permanent investment, not adequately realisable in times of stress, and that the amount so applied should not therefore exceed the proportion of the reserve which we are not likely in any circumstances to need to liquidate. All other investments should be of a temporary and readily realisable character, and the present Consols holding should therefore be disposed of as soon as possible. But I do not agree with Mr. Howard that it is desirable to include Indian Treasury Bills among the temporary holdings, since circumstances which may lead to a run on currency notes, necessitating the realisation of investments—such as war, internal disturbance, or a commercial crisis—will also probably affect the Government of India Treasury balances to an extent that would make it embarrassing to honour a demand for liquidation of Treasury Bills presented by "Currency." In para. 19 of his memorandum, Mr. Howard mentions circumstances which might render it convenient for Government to borrow temporarily from the Currency Reserve; but such borrowing, if necessary, should, I think, be made from the Gold Standard Reserve, as was done to advantage in the early period of the war, rather than from the Currency Reserve, the sanctity of which ought to be strictly respected.

I would therefore confine the temporary investments to discount in India on short term commercial bills, as Mr. Howard suggests (I agree with him that it would be inadvisable to make such loans in London), and on Treasury Bills or other very short term securities of the Home Government. I would, however, limit the holding of commercial bills in India by the condition that these should be bills against goods to be exported, since such goods would bring in fresh goods or specie, and, in the event of political or economic disturbance in India, would be more readily realisable than domestic bills.

28. I would distribute the allowable investments (at 50 per cent. of the average for the three past years) thus:—

(*a*) Permanent rupee investment, up to 20 per cent.
(*b*) Commercial Bills in India, up to 15 per cent.
(*c*) British Treasury Bills or other very short term securities, up to 15 per cent.

Provided that, while (*a*) is not fully worked up, (*b*) or (*c*), or both, may be proportionally increased; and, similarly, any deficiency in (*b*) might be met by increasing (*c*), and *vice-versâ*. Also I agree with Mr. Howard that in the event of the "assumed" note circulation temporarily sinking to a figure at which the investment previously made under (*a*) exceeded the percentage required under the new figure, this need not involve reduction of (*a*), provided that the excess was met by curtailment under (*b*) or (*c*). But obviously no operation should take place under (*a*) or (*b*) until funds are available for the realisation of the Indian Treasury Bills and Consols investment, and the cutting down to its proper proportion of the huge holding in British Treasury Bills. As Mr. Howard recognises, this last process can only be effected gradually, but it should be taken in hand promptly, and could be facilitated (as suggested in his para. 18) by the transfer of funds in connection with the Secretary of State's specie purchases as between Currency and Treasury.

29. The raising of the sterling value of the rupee will, of course, depreciate the rupee equivalent (as compared with the old valuation at 1*s.* 4*d.*) of the sterling securities now held in the Paper Currency Reserve, but this loss will be much more than counterbalanced in the long run by the gain as compared with the old 1*s.* 4*d.* rate on the liquidation of India's Home charges. As regards initial provision of funds to meet this writing down of the sterling securities, in so far as that cannot be met by the withdrawal of notes, I should be prepared to find what is required from the Gold Standard Reserve, which must hereafter be more closely linked with the Paper Currency Reserve. *Per contra*, the Gold Standard Reserve should get the benefit of the profit, as compared with the current standard ratio between the rupee and the sovereign, on sales of gold bullion in India at market prices.

30. As regards the specie portion of the Paper Currency Reserve, like Mr. Howard, I would not object to a certain amount of the gold holding, but not more in any case than 5,000,000*l.*, being normally held by the Secretary of State in London to facilitate his specie purchases; but the rest should be held in India. And in the event of there being serious depletion of the specie stocks in India, the Secretary of State should be prepared, if asked to do so, to send out the Currency gold he possesses, so as to alleviate the situation pending the procurement of fresh specie supplies.

31. As regards the Gold Standard Reserve, I agree generally with the suggestions made in paras. 6 and 7 of Mr. Howard's Memorandum, subject to the qualification that that Reserve

may be drawn upon, as above suggested, to meet the reduction of the equivalent in rupees of the sterling securities held in the Paper Currency Reserve, and that the balance and subsequent accretions should be equally distributed between actual gold holdings and short term securities. And half of the gold holding should, I consider, be located in India, so as to assist in meeting a grave absorption of rupees there pending the acquisition of fresh specie, and to deal with the temporary difficulties referred to in Mr. Howard's Memorandum, para. 19. This proposal is justified, I hold, by the fact that the Gold Standard Reserve must, as I have already said, be much more closely linked hereafter with the Paper Currency, and that the present danger is in respect of drain of specie, and not *qua* maintenance of an artificial exchange value for the rupee.

32. I can now deal very briefly with the specific questions in the Committee's Paper B.[1]

Question I.—Speaking generally, I do not think that the measures here referred to have caused any materially prejudicial effect on Indian trade, but, as I have already said, conditions (*c*) and (*d*) should now be done away with—provided the Government can get an adequate supply of silver and gold—save in special and temporary circumstances *qua* (*c*).

Question II. (*a*) and (*c*).—I have already dealt with these points (*vide* paras. 12 and 13). I do not think that the advantages of stability of exchange are so great as to involve a risk of inconvertibility.

(*b*) Under war conditions India's imports were much handicapped, though the fall in volume was largely masked by increased price, while there was a large demand at high prices for her exports. As more normal conditions come into play there will be a large demand for imports to meet the deficiency of previous years, but against this has to be set the present shortage of world supplies, aggravated by shipping difficulties, and the fact that Indian exports will be in large demand also. I think, therefore, that there will be no material difficulty in India's foreign trade showing the same general proportion (for a series of years) of exports to imports as prevailed in the years before the war.

Question III.—Every effort should be made to keep the then existing rate of exchange, to which trade would have adapted itself (*vide* para. 23).

Question IV. (*a*).—Yes, but under the conditions stated in paras. 20 and 21.

(*b*) If the result was found to be materially injuring trade, the position should be reconsidered with reference to the alternative dangers of inconvertibility (*vide* para. 14).

(*c*) No. I agree with the Government of India (para. 5 of their telegram of 14th April) in condemning this expedient.

(*d*) The Government of India should be prepared to purchase silver (through the Secretary of State) at rising prices so far as such increase of price is necessary to save their stocks and prevent the risk of inconvertibility, but I regard it as most important that silver supplies should be supplemented by the importing of gold; and if a situation were arrived at in which the resultant rates of rupee exchange were gravely prejudicial to trade, my answer to (*b*) above would apply.

(*e*) No. The Secretary of State should not sell drafts to an extent which would risk inconvertibility, but all that is possible should be done to obtain supplies of silver and gold which would allow of normally free sales.

(*f*) If it were necessary to restrict the Secretary of State's Council drawings, it would be preferable to put Bills up to auction rather than adopt the present unsatisfactory method of confining their supply to privileged buyers (*vide* para. 20).

Question V.—The consequences of inconvertibility, which I have dealt with at the commencement of my memorandum, would, I hold, be disastrous.

Question VI.—My views in respect of this point have been set forth in paras. 10 and 16 to 18.

Question VII.—The present system of restricting Council drafts can only be justified as an alternative to inconvertibility, and if it has to be adopted for a time, the drafts should, as I have already said, be put up to auction; otherwise I would have free sales at the rate of exchange fixed for the time being. Reverse Councils should, in any case, be freely sold whenever the established rate of exchange threatens to "sag" temporarily, and I would like the Government of India to sell them at any time at a rate somewhat below the established exchange rate. (*See* para. 24).

Question VIII.—I have indicated my views in paras. 26 to 31.

APPENDIX XII.

Memorandum by Mr. E. L. De M. Mocatta.

In submitting the enclosed evidence, I would state that I have no views which I wisb particularly to lay before your Committee, and that I have confined myself to setting out as briefly as possible, some of the facts in regard to production in the past, with a few indications as to the possible demand and price movements in the future.

Section 1.—Production.

In order to estimate the probable production of silver in the near future, it is natural to make a survey of the production in the past, and to trace as far as possible, the connection between price and production. Such a survey, however, gives very paradoxical results, as it would appear that the production increases as the price falls, and the higher level of the last three years, does not appear to have caused any appreciable increase in the production. The last year in which silver was quoted at 60*d.* or over, was 1872, and the average price which in that year was $60\frac{5}{16}d.$, declined almost without recovery until 1915, for which year the average was $23\frac{11}{16}d.$ During the same period, the production increased from 63,000,000 ounces in 1872 to 226,000,000 ounces in 1911. The reason that the heavy fall during this period did not arrest production, is probably that silver is chiefly produced as a by-product in gold, copper or lead mines, the chief exception to this in recent years, being the Cobalt field, discovered in 1903, where the richness of the deposits enabled most of the mines to produce silver at a cost of less than half its selling price, even when the price was well below 30*d.* The high-water mark in production was reached in 1911, when 226,000,000 ounces was produced, but for the two years before and after, the production exceeded 212,000,000 ounces. From 1914–17, an average of about 170,000,000 ounces was produced, the decrease being due to political troubles in Mexico. The estimated production for 1918 is about 180,000,000 ounces, the increase being due to more settled political conditions in that country. These figures show how apparently small an influence price has had on production in the past, but if an actual and prospective price could affect output, it certainly should do so now, when apart from any of the usual demands for silver, the American producer is guaranteed under the provisions of the Pittman Act the price of $1 per ounce, until the total amount sold under the Act has been replaced, which is not likely to be less than two or three years. Reports as to whether the output of the United States of America can and will be materially increased, are very conflicting, but there is no doubt that important financial interests, both in this country and America, are directing their attention to properties in Mexico, and that it only needs stable Government in that country for the production to reach, and probably considerably exceed, its previous record. In this connection it is worth noticing that the years in which the world's production exceeded 200,000,000 ounces, correspond to the years in which Mexico produced over 70,000,000 ounces, and that Mexico's maximum production (79,000,000 ounces) occurred in the year of the world's maximum production.

Burma also contains a field where the production of silver is likely to show a steady increase. In the Cobalt field, on the other hand, high-water mark was reached in the year 1911, since when the production has shown a steady decrease. It is thought probable that further fields may be discovered in Canada, but this is quite uncertain. The other sources of supply show very small variations from year to year, and therefore it seems that in Mexico lies the chief hope of bringing the production figures up again over 200,000,000 ounces in the next few years, though the possibility of the discovery of important new fields must not be over-looked.

Section 2.—Anticipated Demand.

A good deal has been heard from various quarters about the probability of the various countries lately at war in Europe doing something to reduce their enormous note circulation by the purchase and coinage of silver. That a good many countries in Europe would like to purchase for coinage is probable, but it hardly seems likely that France or Germany will, in the near future, be buyers for this purpose on a large scale. It is true that France has purchased considerable amounts in the past few months, but it must be remembered that with an exchange of 30 fcs. to the £, she could not pay much over 55*d.* per ounce standard for even her smaller coinage, which is 835 fine, while the limit for 5 franc pieces, which are 900 fine, would be about 51*d* Germany's coinage is 900 fine, and with an exchange of 60 marks to the £, she could not afford to pay more than 23*d.* Most of the smaller and new States in Europe would probably like to purchase silver for subsidiary coinage, but it almost looks as if Europe were too impoverished to afford such a luxury as silver at present. In the past, the chief demand has always come from India, and to a much smaller extent, China, and I have little doubt that these countries, together with Mesopotamia and East and West Africa, will be the chief consumers of silver in the future. In all these countries the demand for silver is likely to increase in proportion as their trade develops, but there is also the

possibility that a good part of this increased demand may be met by the extended use of gold.

As an instance of how quickly the demand for silver increases in a newly-developed country, I append some figures of the issue of silver coin in West Africa :—

Prior to 1894 the quantity was negligible—well under 100,000*l.*

		£
	1895 - - - - -	235,456
Average for 5 years	1896–1900 - - -	257,090
„ „	1901–05 - - - -	262,786
„ „	1906–10 - - - -	666,190
„ „	1912–13 to 1917–18 - - -	964,100

These figures do not tell the whole story, as during the last three years the requirements of the West African Currency Board were not met in full, being limited by—

1. The rationing arrangements in force between various Government Departments.
2. The difficulty of finding sufficient coinage facilities,

as a result of which, the Board have made their notes temporarily inconvertible.

China has been a very heavy buyer since the control of silver was released, but it is uncertain whether this is merely a seasonal movement on a rather larger scale than usual, to be followed later by weakness in China exchange, and possibly sales from that quarter, or whether her position has been so much improved by the war that we may expect her to consume more silver in the near future than she has done in the past. There is also the possibility of considerable loans to China, which would tend to increase her demand for silver for the time being.

SECTION 3.—PROBABLE MOVEMENTS IN PRICE.

Although the movement of price is always a very difficult thing to prophesy, which I do not propose to attempt, there are certain factors which I would call to your notice. The first of these is the provision of the Pittman Act, that all the silver melted and sold should be replaced by purchases from American producers, when tendered by them at $1 per ounce. This insures that price being the minimum for several years, as we may safely assume that other demands would easily absorb silver not produced in the United States of America. Subject to this, I would be inclined to suggest that the price of silver will probably be determined by the price which India is prepared to pay for it. Without support from that quarter, the price would rarely rise above the $1 per ounce, while with India a buyer, there would not be much fall from the price she would pay, and this price would tend to be temporarily exceeded when other demands came on the market. I would point out, however, that supposing American exchange were to fall to the neighbourhood of $4 to the pound, and remain there, the quotation in London would rise to about 56*d.*, in order to remain above the parity of $1 per ounce. Assuming the rupee were raised to 2*s.*, the price India could afford to pay would be about 64*d.*, and there would consequently not be a very large margin for fluctuations.

It will thus be clear, that the course of American exchange will play an important part in determining the fluctuation of the London Silver Market, in spite of the fact that the New York official price for silver is fixed by the London price, even when actual dealings in New York take place on a higher basis.

APPENDIX XIII.

Letters and Memorandum from Chambers of Commerce in India, &c.

(a) *Letter from the Secretary, Burma Chamber of Commerce, Rangoon, to the Secretary to the Government of India, Finance Department, dated the* 30*th May* 1919.

I am directed to thank you for your letter No. 1189 F., dated 9th May 1919, in reference to the appointment of a Currency Committee by the Secretary of State for India, and to say that this Chamber does not desire to forward a written statement of its views, or to tender evidence through a representative witness. On the contrary, my Committee would prefer to leave this important question of currency to the experts of India and London, who have at their disposal information not readily obtainable by the public, as my Committee feel assured that Government will endeavour to fix on a system which, while it does not unduly favour either the exporter or the importer, will encourage trade by freeing the currency medium from violent fluctuation.

(b) *Letter from the Secretary, Chamber of Commerce, Bombay, to the Secretary to the Government of India, Finance Department, dated the* 5*th June* 1919.

I am directed to acknowledge receipt of your letter No. 1189, dated 9th ultimo, regarding the appointment of a Currency Committee, and inquiring whether this Chamber desired to give evidence.

2. In reply, I am to state my Committee have decided to submit the following memorandum setting forth shortly the views of this Chamber in this matter :—

The subject is one which is too wide and many-sided to be fully or satisfactorily dealt with by this Chamber; members cannot be expected to be unanimous on such a complex question as the points of view of importers and exporters naturally differ.

As regards the effect of the rise that has recently taken place in exchange on Indian trade generally, prices have adjusted themselves, and there is no evidence of export trade having been stopped in any commodity on account of the rise in exchange.

It was announced here on 13th May that exchange was being raised from 1*s.* 6*d.* to 1*s.* 8*d.*, and it will be well to examine the fluctuations in price which occurred in a few typical commodities. Linseed declined from Rs. 19 to Rs. 17, but has since gone considerably over Rs. 19 on strong buying for export, owing to the demand from the European consuming markets. The movements of prices in the sugar bazaar were only slight, as this bazaar is at the present time governed principally by considerations of local supply and demand, and is rather isolated from any sterling market, owing to the absence of imports. The rupee prices for Mauritius sugar were as follows :—

12th May	13th May.	14th May.	15th May.
28*s.* 4*d.*	28*s.* 2*d.*	28*s.* 6*d.*	28*s.* 8*d.*

Cotton provides an interesting study and is perhaps the best illustration of prices becoming adjusted to the new rate of exchange; the governing factor being the American market.

Price of Broach.			America as known.	
	Opened.	Closed.		
			10th - -	28.12 May.
			12th - - -	28.15 „
12th May - - -	513	499		28.70 „
13th May, morning -	499			
afternoon -	482			
14th May - -	483	461		
15th May - - -	462—472	—466		

A considerable rise in Indian cotton has since taken place following the advance in America and export business in cotton continues.

As regards textiles, the movement in bazaar prices has not been noteworthy. The rise in exchange has stimulated Manchester business and enabled buyers and sellers to meet each other to some extent.

Food prices have been governed by considerations of local supply and demand.

Should it be found necessary to raise exchange to a materially higher point it is hoped that due regard will be paid to the interests of the agriculturist, which depend on the ability to export Indian produce at world prices.

There can be no doubt that stability of exchange is desirable, but the ultimate rate to be aimed at can only be arrived at by exhaustive examination of the silver position of the world. In the meantime it is a matter of prime importance to the commercial community that some temporary stability should be attained. My Committee are of opinion some definite statement of policy should be made as early as possible applicable to the period that must intervene before the silver position can be gauged with sufficient precision to admit of the enunciation of a final policy.

It is impossible to disregard entirely the sentiment of the native of India which leads him to hoard the precious metals. It will be desirable to put an end to the present embargo on the importation of gold and silver as early as possible even although there may appear to be little prospect of obtaining supplies in the near future. In this connection my Committee notice that in 1916–17 an aggregate of 4½*l.* millions of gold were produced by the Indian mines. It would seem worth examination whether this might not be utilised in India either as a backing for a new gold standard or as a more immediate measure to satisfy in some degree the incessant demand on the part of the natives of this country for the precious metals.

It has frequently been suggested that metallic currency might be temporarily dispensed with until silver declined to a lower level. My Committee are not prepared to say that inconvertibility with certain reservations might not be advisable as a temporary expedient, but they are without the necessary data to justify their putting forward any definite recommendations on the subject.

Government controls must be regarded as a necessary evil in certain circumstances, but should be abolished as soon as possible. The present system of maximum rates is open to serious objection because whenever there is pressure on the part of exporters to sell bills, the rates quoted by the Exchange Banks cease to be effective and bills can only be sold if the seller will provide some proportion of cover for them.

(c) *Letter from the Secretary, Chamber of Commerce, Madras, to the Secretary to the Government of India, Finance Department, dated the 3rd June 1919.*

I have the honour to acknowledge receipt of your letter No. 1189 F., dated the 9th May 1919, advising the Chamber that the Secretary of State has decided to appoint a Currency Committee to advise him as to the future exchange and currency policy of the Government of India.

In reply to the invitation of the Government I have the honour to inform you that the Chamber does not propose to tender evidence through a representative witness, nor do any members of the Chamber desire to do so in their individual capacity. On receipt of the terms of reference mentioned in your letter under reply, the Chamber proposes to put forward a written statement of their views. Briefly stated, the views of the Chamber are that it is of paramount importance that every effort should be made by Government to ensure stability of exchange, and in fixing a stable exchange the interests of India should be considered before the interests of other parts of the Empire.

If the exchange value of the rupee is to follow the price of silver, there is no limit to the height to which exchange may rise. The Chamber is of the opinion that if the only alternative to this is an inconvertible paper currency, it would be better for Government to face the position at once than to continue on the present indefinite lines.

As mentioned above, the Chamber will address Government further on receipt of the terms of reference mentioned in the letter under reply.

(d) *Memorandum by the Bengal Chamber of Commerce.*[1]

The terms of reference to the Currency and Exchange Committee are as follows:—

To examine the effect of the war on the Indian exchange and currency system and practice and upon the position of the Indian note issue, and to consider whether in the light of this experience and of possible future variations in the price of silver, modifications of system or practice may be required, to make recommendations as to such modifications, and generally as to the policy that should be pursued with a view to meeting the requirements of trade, to maintain a satisfactory monetary circulation, and to ensuring a stable gold exchange standard.

The Chamber propose to examine the subject in order as set out in terms of reference.

I.—Effects of the War.

(a) *On Exchange.*—The visible effect has been a rise in the exchange value of the rupee from 1/4*d.* to 1/8*d.*, accompanied during the past two years by a reluctance on the part of the Exchange Banks to purchase bills unless the seller of the bills is able to provide, or to earmark, sufficient remittances to balance the purchase. In fact practically throughout this period natural causes have operated which, in the absence of restrictions, would have brought about a still greater rise.

(b) *On Note Issue.*—The active note circulation has risen from 49·97 crores on 31st March 1914 to 133·59 crores on 31st March 1919. The gross circulation of one rupee notes, which were first issued in December 1917, increased from 32¾ lakhs on 31st March 1918 to 1,051½ lakhs on 31st March 1919.

(c) *On Metallic Currency.*—The absorption of silver coin (rupees and half rupees) during the five years 1914–19 has been 110·39 crores, as compared with 43·91 crores during the five years 1909–14. The absorption of small coin of 4 annas and less has risen from 56 lakhs in 1913–14 to 99 lakhs in 1917–18 and to 277 lakhs in 1918–19.

(d) *On Treasury Balances and Reserves.*—The following is a comparison of the Treasury Balances and the several Reserves held in London on 31st March 1915 and 31st March 1919, the figures for the latter year being provisional.

	At 31st March 1915.	At 31st March 1919.
	£	£
Treasury	7,904,914	8,715,046
Paper Currency Reserve—Securities ...	2,666,666	54,998,953
Gold ...	5,100,000	82,391
Gold Standard Reserve—Securities ...	13,168,219	29,848,332
Gold... ...	1,258,322	—
Short Loans ...	—	6,015,672
Special Reserve	—	6,939,612
Total	£30,098,121	£106,600,006

Thus India is holding in England balances enormously in excess of her needs.

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[1] The following telegram from Bengal Chamber, dated 6th November 1919, was also received in the course of the enquiry:—Committee Bengal Chamber having carefully considered proposal to fix Indian gold acquisition rate with varying Council rate, thereby basing rupee on gold and not on pound sterling, are of opinion that this proposal will lead to constant fluctuations in sterling value of rupee, thus injuriously affecting commerce generally, and reiterate previously expressed opinion that stability as between India and England is all important.

II.—Reasons for the above Changes.

(*a*) As regards Exchange.

(1) *Balance of Trade.*—If we examine the figures of import and export of merchandise for the five pre-war years 1909–1914, and compare these with the corresponding figures for the war years 1914–1919 we find that the excess of exports in the former case was 391 crores, and in the latter 381 crores, there being thus practically no difference between the two periods. These excesses are in normal times balanced chiefly by imports of gold and silver, by Council Bills and by private remittances.

(2) *Gold and Silver.*—India's private imports of gold have been on a steadily increasing scale, and in 1911–1912 the net imports reached a total of nearly 38 crores.

For the five years 1909–1914 her private net imports of gold amounted to no less than 144 crores, and of silver to 36 crores. Her total private net imports of the precious metals during these years thus amounted to 180 crores, as against 55 crores during the following quinquennial period.

As a result of the war, India's imports of gold were almost entirely cut off, owing to the refusal of the gold standard nations to part with their supplies. The imports of gold consequently fell to 39 crores for the five years 1914–1919, of which 18 crores were acquired by Government, leaving only 21 crores for private needs, and reducing the yearly average supply to a figure below that of any of the preceding 25 years except famine years.

Unable to obtain gold, India turned to silver, the demand for which became almost insatiable, and in the three years 1916–1919 she absorbed no less than 107 crores of rupees, an average of 36 crores yearly of a weight of 123 million ounces of fine silver, or considerably more than half of the maximum annual production of the world, which has now been reduced owing to internal trouble in Mexico and the increased cost of production in other parts of the world. At the same time the demand for silver for coinage purposes increased all over the world, all influences combined resulting in an increase of price from 24*d.* in August 1914 to 55*d.* in September 1917. The price then fell to 41$\frac{7}{8}$*d.* in October 1917, and remained between that figure and 50*d.* till May 1919, arrangements having been made by the United States Government to supply India with silver from their currency reserve. The exchange value of the rupee had meantime been raised to 1/6*d.* in April 1918, but in May 1919 owing to the withdrawal of the prohibition of export from the United States the price of silver rose suddenly, and as a result it has since been necessary for the Secretary of State to raise his price for Councils to 1/8*d.*

Thus although the visible cause of the rise in exchange is the rise in the price of silver, the main cause is without doubt the refusal of the Gold Standard purchasers of India's produce to pay for this produce in gold, thus compelling the Government of India to import silver in order to meet trade requirements. Nor can it be said that India's demands on this score were unreasonable, for her absorption of the precious metals, including gold and silver bullion and coin and rupees, was 224 crores in the years 1909–14 and only 165 crores in the years 1914–19.

The following table shows the figures :—

——	Net private imports of gold. Crores.	Net private imports of silver. Crores.	Total of 1 & 2. Crores.	Absorption of rupees. Crores.	Total absorption of the precious metals. Crores.
1909–14 ...	144	36	180	44	224
1914–19 ...	39	16	55	110	165

(3) *Councils.*—The actual amount of Councils less Reverse Councils available for trade purposes in the five years 1909–14 was £137 million, and in 1914–19 £103 million to which must be added £27 million American credits. Therefore the favourable balance of trade brought about by the impossibility of gold importation has not been corrected by sales of Councils.

(4) *Private Remittances.*—In normal years a very large proportion of the profits of British merchants is remitted to England, thus indeed lessening the favourable balance of trade. Whether this has occurred to a normal extent during the five war years is open to doubt. Very large profits have been made, and it would appear from the large balances held by successful manufacturing concerns, and from the large sums invested in War Loans and Treasury Bills, that the difficulty of bringing funds from England to India and the high British income tax have encouraged investors in Great Britain to leave their money in India, thus reducing this invisible factor in the reduction of the balance of trade. This point was clearly recognised by Sir James Meston in his introduction to the Financial Statement of 1919–20.

(*b*) As regards Note Issue and Currency.

(1) *War Payments.*—The net war transactions by the Indian Government on behalf of the British Government amounting during the years of war to about £200 million, have ultimately largely been made in notes.

(2) *Prohibited Transport of Silver.*—It is probable that the prohibition of the transport of silver by rail has forced payment to be made by notes instead of by rupees. As an instance of this may be given the comparative figures of the notes and rupees remitted by the Bank of Bengal to the jute centres of Dacca, Naraingunge and Chandpur for the busy season August to October 1913 and 1918:—

	Rupees.	Notes.	Total.
1913	6,78,51,000	2,00,000	6,80,51,000
1918	51,70,000	5,66,70,000	6,18,40,000

A further example may be given in the receipts of one of the largest Calcutta exchange banks for the month of March 1914 as compared with March 1919. In 1914 the percentage of notes to total receipts of notes and silver was 86·7 and of silver 13·3; in 1919, the figure for notes was 96·27 and for silver 3·73.

(3) *Disappearance of Rupees.*—It is also probable that Gresham's law has operated in up-country districts, where notes have been at a discount, and the disappearance from circulation of the more valuable silver currency has resulted. As a medium of currency, gold has long disappeared.

(4) *Growth of Trade.*—It has been estimated that the increase in active circulation of notes and rupees as between the periods 1900–04 and 1914–18 was 71 per cent. For the same periods the growth in the value of external trade was 83 per cent., and to this growth in external trade must be added the great increase in internal movement of such commodities as iron and steel, coal and oil. Figures for 1918–19 are not yet available, but it would appear from the above that the growth of the circulation of currency has, up to 1918, hardly kept pace with the growth in the volume of trade.

(*c*) As regards Metallic Coins.

(1) *Difficulty of obtaining Gold and Silver Bullion.*—Without doubt this has been the chief cause of the enormous demand for rupees. The price of a sovereign in Bombay on 19th June 1919 was Rs. 21/–, whereas for imported sovereigns the Indian Government will only pay Rs. 12–4–6; silver bullion has been scarce, and is somewhat dearer than the rupee. Rupees have therefore been demanded, not only for currency, but for melting and the provision of ornaments.

(2) *Reluctance to buy imports at high prices* has also probably been a contributory cause, and has led to the excess hoarding of rupees, the only form of precious metal obtainable.

(3) *Preference for coin in any form to notes* has led to a great increase in the absorption of smaller silver, nickel and bronze coins.

(*d*) As regards Treasury Balances and Reserves.

(1) *Heavy Transactions in India on account of the Home Government.*

(2) *Lesser Payments in the United Kingdom on account of the Indian Government.*—These two causes combined have, in spite of India's contribution to the war, totalling up to 31st March 1919 about £68 millions, brought about a transfer of funds from India to England of £76 millions as between 1915 and 1919. They are fully explained in the Statements of the Finance Ministers for 1918–19 and 1919–20.

III.—Requirements for the Future.

(*a*) As regards meeting the Requirements of Trade and maintaining a Stable Gold Exchange.

(1) *Free sales of Councils and Reverse Councils as required.*—The principle laid down by the Currency Commission of 1914 was that Council drafts are sold for no other reason and to no larger amount than is necessary to meet the requirements present or prospective of the Secretary of State in London, although the convenience of trade and the regulation of exchange are important considerations in the management of the system.

It was however admitted that if the expense and waste involved in the shipment of sovereigns from India to London on Government account are to be avoided, it is necessary for the Secretary of State to sell sufficient drafts, not merely to meet his own requirements, but also to satisfy the demands of trade up to such an amount as will enable the balance of trade in India's favour to be settled without the export to India on private account of more gold than is actually required in India for absorption by the public.

The Chamber are not prepared to accept the above statement as defining the restrictions which should be placed on the use of Councils. They are strongly of the opinion that unless the Secretary of State and the Government of India are respectively prepared to sell Councils and Reverse Councils within a comparatively narrow limit of price and to the full extent of the trade demand, it will be impossible to retain a stable basis of exchange.

(2) *Imports of Gold.*—But although the free sale of Councils is essential for the rectification of the balance of trade and therefore for the maintenance of a stable exchange, the Chamber regard it as equally essential that India should be allowed to import whatever supplies of gold she may require.

The Currency Commission of 1914 thus defined the position : " The extent to which India should use gold must in our opinion be decided solely in accordance with India's own needs and wishes, and it appears to us to be as unjust to force gold coins into circulation in India on the ground that such action will benefit the gold using countries of the rest of the world as it would be to attempt to refuse to India facilities for obtaining gold in order to prevent what adherents of the opposite school have called the drain of gold to India." With this view the Chamber are in complete agreement. They have never favoured the forcing of gold circulation upon the people, but as the gold production of the world has increased, so have the population and the wealth of India in comparison with those of the rest of the world, and the Chamber maintain that if India requires gold and is prepared to pay for it, then India must be allowed to have it, not only because she is entitled to it but because without it trade cannot be balanced.

The imports of gold for the five years ending March 1914 were the largest in India's history. During this period her average yearly imports were about £20 millions, or approximately 20 per cent. of the world's production, and the population of India is 19 per cent. of the population of the world. The following figures in 1,000s of rupees illustrate the net imports of the precious metals, and their percentage of the total imports of merchandise and treasure, over a series of years :—

	(1) Total Imports.	(2) Net Imports of treasure.	Percentages of (2) to (1)
1895–96 to 1904–05 (*average*)	105,70,50	13,58,92	13 per cent.
1905–06	143,76,48	16,18,10	11 ,,
1906–07	161,87,58	38,86,16	24 ,,
1907–08	178,93,21	36,83,60	20 ,,
1908–09	151,53,10	16,42,39	11 ,,
1909–10	160,17,47	31,12,44	19 ,,
1910–11	173,44,16	32,60,89	19 ,,
1911–12	197,52,63	43,09,69	22 ,,
1912–13	228,46,14	51,20,00	22 ,,
1913–14	234,74,76	36,35,68	15 ,,
1914–15	166,73,90	16,51,89	10 ,,
1915–16	150,11,55	3,72,05	2 ,,
1916–17	198,70,60	32,03,55	16 ,,
1917–18	216,11,92	44,22,04	20 ,,
1918–19	259,92,62	62,35,52	24 ,,

Next to piece-goods, gold and silver together are the most important item on the list of imports, and must be regarded as articles of merchandise. The use of gold and silver is bound up with the religious and marriage customs of the people—customs that cannot be changed by mere decrees. It is therefore necessary in the opinion of the Committee that as soon as possible unrestricted imports of gold and silver should be allowed, and it should be noticed that during the 20 years preceding the war the value of the import of gold considerably exceeded that of silver. It will be clear that gold rather than silver dominates the position, and that if India is allowed partly to balance her trade in gold, the local demand for silver must decrease, and consequently the price of silver must fall.

The Chamber believe that India would be prepared to pay a premium for the import of gold, and they would emphasise the Indian market value of gold, which was Rs. 33–8–0 per tola, or Rs. 89 per ounce, on 19th June 1919.

During the war the gold in the United States Federal reserve system has increased from $592 million to $1,786 million, or approximately by £250 millions; the gold in Spanish banks has increased by £70 millions; in the Netherlands by £43 millions; in Switzerland by £10 millions; and in Norway and Sweden by £14 millions. The net import of gold into India in the same period was £26 millions.

In other words, these countries with a population of 114 millions have increased their gold reserves by £387 millions, while India with a population nearly three times as large, has had to be content with £26 millions.

Just as foreign countries are entitled to be paid in gold for services rendered to the Allies, so is India entitled to be paid for the services she has rendered. The assistance which India has been able to render to the Empire has probably not been recognised by those not closely in touch with the position, but it has been clearly indicated in the Financial Statements of 1917, 1918 and 1919. India is proud that she has been able to render these services and as a part of the British Empire it was her duty to render them. But it is equally the duty of the Empire to pay her for them, just as the Empire has paid her other creditors.

(3) *The Gold Standard Reserve.*—It is of course a corollary of stability that Government must be prepared to sell Council Bills, and also when necessary, Reverse Councils, in order to ensure keeping the rate of exchange approximately at the point that may be fixed; and equally the Gold Standard Reserve must be held in such a way and to such an extent as will ensure its fulfilling its functions when the necessity arises. The Chamberlain Commission were of opinion that no limit could be fixed to the amount up to which the Gold Standard Reserve should be accumulated, but they were of opinion that a much larger proportion of it should be held in actual gold than was then held in this form. They accordingly suggested that the gold portion of the Reserve should be raised as soon as possible to £15,000,000 and that thereafter the authorities should aim at keeping one-half of the total Reserve in actual gold. And they considered that the proper place for the location of the Gold Standard Reserve was in London. The Currency Committee will no doubt consider whether the policy followed in the past has been profitable, particularly with reference to the investment of a large portion of the Reserve in securities. At the time when the investments were made, these securities were of course regarded as fully liquid, but it is often the case that a liquid security is liquid only when it is desired to sell a small quantity, and not when it is necessary to dispose of a large block.

The view of the Chamber is that a very large portion of the Reserve should be held in gold, and they trust that the Currency Committee will recommend this policy. They are also inclined to think that the Reserve should continue to be held in London. As to the amount which should be aimed at, it is difficult to state a figure. An amount that would appear to be sufficient now might be quite inadequate a few years hence under changed conditions. The Reserve should, however, be sufficiently large to enable the Secretary of State to meet any demands that may be made on him for a period of not less than, say, two years. It should be utilised only for the payment of Reverse Councils and should not be ordinarily disbursed to meet current expenditure, except possibly by way of temporary loan.

(*b*) As regards the maintenance of a satisfactory Monetary Circulation.

(1) *Notes.*—The experience of the past few years has shown that, however reluctantly, the people of India are being gradually educated into the use of notes as a form of currency. This is particularly noticeable from the readiness with which in many parts of India, but particularly of course in the big towns, one rupee notes have passed into circulation.

There are, however, two objections to the use of notes in India; the first is their liability to destruction by white ants, and the second their liability to damage by water. As has been shown above, the use of notes has rapidly developed in the jute districts of Eastern Bengal but constant complaints have reached Calcutta that it is impossible for the cultivators, living as they do during the monsoon season on numerous small islands in what is really one vast lake, to keep their notes from being reduced to pulp through the action of the elements. It is therefore very necessary that the notes, especially those of small dimensions, should be printed on strong and, if possible, water-proof paper.

The Committee will doubtless consider with great care the proportion of metallic backing to be held in the Currency Note Reserve. On 31st March 1914 the total issue of notes was Rs. 66 crores, and the Reserve was composed of Rs. 48 crores (or 78 per cent.) metallic and Rs. 14 crores (or 22 per cent.) security backing; on 31st March 1919, the total issue of notes had risen to Rs. 153 crores, and the metallic backing was Rs. 55 crores (or 36 per cent.) while the security backing had risen to Rs. 98 crores (or 64 per cent.). These figures are significant.

The Chamber suggest that the Committee should consider whether a definite minimum percentage should not be fixed for the proportion of metallic backing to be held in the Currency Note Reserve and whether the proportion of securities and metal should not be determined by this minimum percentage rather than by an actual limit upon the amount of securities.

(2) *Gold and Silver Coins.*—The Chamber deprecate any alterations in the issue or fineness of the rupee, for its debasement would cause the gravest mistrust of Government promises. The question is discussed later in this note, but they consider, as they have always done, that the silver rupee is, and will for long remain, the most suitable coin for the requirements of the people.

Though in certain parts of India gold was, before the war, in active circulation, it never became popular in Bengal, and the Chamber see no reason to depart from their previously expressed opinion that there is no necessity for pressing sovereigns on India as a currency medium, or for minting gold coins in Bombay.

As regards the smaller silver coins, none of these have the significance of the rupee—though the silver eight-anna is legal tender—and the Chamber do not consider that it is necessary to issue them provided they are replaced by satisfactory coins made from the baser metals.

(3) *Nickel and Bronze Coins.*—There is no more remarkable feature in the history of Indian currency during the war than the absorption of small coin. The following are the figures for the years 1913–14 and 1918–19 in thousands of rupees :—

	4 annas.	2 annas.	1 anna.	¼ anna.	Total.
1913–14	15,38	12,89	19,91	7,95	56,13
1918–19	116,34	94,75	46,82	19,62	277,53

The 4 anna issues have been silver, the 2 annas almost entirely nickel, the 1 anna entirely nickel, and the ¼ anna bronze.

These figures clearly confirm the view that as currency the poorer Indian prefers coin to paper, and without doubt receivers of Re. 1/– notes have used every opportunity for cashing them in favour of the small token coin. The Chamber consider that nickel 4 anna and 8 anna coins should be introduced, and that ample reserves of all nickel coins should be kept ready for issue in case, on account of absolute scarcity of rupees, it might become necessary to suspend their issue.

IV.—Modifications of the Present System.

(*a*) Basis of the Old System and Present Temporary System.

It has been the task of every previous commission or committee discussing Indian exchange to consider how, in the face of the rapidly falling price of silver, it would be possible to maintain a stable gold exchange. The system has admirably stood the test of years, and only failed when silver rose to a point above the intrinsic value of the rupee, a possibility which was never even considered by the various committees.

The circumstances which led to the raising of the exchange value of the rupee first to 1/5*d.*, later to 1/6*d.*, and finally to 1/8*d.* are clearly set forth in Sir William Meyer's Financial Statement for 1918–19, paras. 47/53. Certain forms of prohibitory legislation, assisted by the active co-operation of Exchange Banks and others, made it possible to maintain exchange at the point at which it had been fixed by Government. But as Sir William himself admitted, these restrictions can only be regarded as temporary, and not in any way as establishing a permanent system for the maintenance of a stable exchange.

The sudden and unexpected increases in the exchange rate have caused severe losses and dislocation of business to exporting firms, and had it not been that circumstances have been altogether abnormal and that the rises in exchange have occurred when foreign markets were rising and India's produce was badly needed, the effect of the rises would have been far more important and permanent than they have been. Further, although the rate of exchange is to-day nominally 1/8*d.*, exporters are prevented from operating freely because they find great difficulty in selling their bills even for near positions and are almost entirely debarred from selling for forward positions. Under the old basis of exchange it was always possible to buy and to sell for any reasonable forward position at a rate; it is now impossible because in view of the uncertainty of the future the exchange banks are not willing to overbuy or to oversell for a forward position at any price.

(*b*) Possible Modifications.

(1) *Raising of the Exchange Rate to a point independent of Silver.*—When the Indian mints were closed in 1893 the value of silver in the rupee was practically 15*d.*; between then and 1914 it fell at times to below 9*d.* The rupee, once stabilised at 1/4*d.*, remained for practical purposes at this point till 1916, as a token coin. The problem now before the Committee is to consider whether it is possible to fix a rate for the rupee which will again, independent of the price of silver, enable the Secretary of State to maintain the rupee as a token coin; and, if it is possible to fix such a rate, to consider what the effect of this rate would be on the trade of India.

Without further details of the possible production of silver in the future, the cost of production, and the requirements of other countries, it is impossible for the Chamber to suggest what such a rate should be. The operation of the Pittman Act places the rate certainly above 1/6*d.* but the Chamber cannot hazard any opinion as to how much above this point it would be necessary to go.

The effects of a high and a low exchange respectively upon an exporting country have been argued and debated at much length.

The Herschell Committee agreed that theoretically a falling exchange should provide a stimulus to exports, and this argument was strongly urged before the Commission of 1898; but the Herschell Committee found that there was no justification in fact for this hypothesis, and that exports had not during the period 1870 to 1890 increased or decreased conversely according to the rise or fall in exchange. They agree however that a falling exchange may temporarily benefit the employer at the expense of the wage earner, because wages rise more slowly than prices. And if this be accepted, it is evident that a rising exchange must to a very large extent affect the return from exports, because although wages should theoretically fall, it is obviously far more difficult to lower wages than to raise them.

If we assume that 2/– would be a rate which would make the rupee independent of the price of silver, the sterling price of Indian produce would, in order to yield the same rupee price as in pre-war days, have to rise 50 per cent., assuming the cost of production to remain constant. At the present moment the prices of practically all commodities are more than 50 per cent. over their pre-war prices, and therefore the rise in exchange to 2/– as far as produce is concerned, might not have any serious effect. But present conditions are abnormal, and it is therefore necessary to consider which of India's exports are liable to competition with gold and silver standard countries, and would be severely handicapped by an exchange based considerably above the present value of silver.

Food grains come first among India's exports, and although theoretically India should suffer as regards food grains through a rise in exchange, it appears probable that the price of food will remain so high for such a long period that the effect of the rise might not be severely felt.

Jute is a monopoly of India, and it is probable that, unless substitutes are discovered, the increased cost would have to be paid by the purchaser.

On the other hand India is only one of many producers of *cotton*, and while at present prices she could easily compete even at 2/– exchange, she would be very seriously affected if cotton prices fell to anything like their pre-war level.

Tea is in competition with China, Java and Japan; it has been shown that India can compete with China, a silver country, even when the exchange value of the rupee is far above its intrinsic value, but any rise in exchange must seriously prejudice India in competition with Japan and Java, the latter of which in particular has of late years become, and probably will continue to be, a serious competitor with India.

As regards *hides and skins* India competes in buffalo hides with China, Java, and the Straits; and in cowhides with Africa; but in goat skins her position is probably unassailable.

But the effect of a high exchange must also be considered as regards *imports* and *India's industries*.

Every effort has lately been made to stimulate India's industrial production; high exchange must, other things being equal, mean lower priced imports, and lower priced imports may well seriously damage, if not cripple, those industries which have been started during the war and have not yet had time to get firmly established.

The effect on one of India's greatest industries, cotton manufacture, especially as regards Japan, may be serious. Provided that the cost of production in Japan does not rapidly increase, a premium will without doubt be given to imports of Japanese goods made of Indian cotton to the extent of the rise in exchange on the cost of production, which in India is not likely to grow less.

Generally, therefore, it is the opinion of the Chamber that the fixing of exchange at a point independent of the price of silver is liable seriously to affect many of India's exports and industries, if the rate be fixed unduly high, although owing to abnormal world prices this effect might not be evident for some time.

It is therefore the opinion of the Chamber that every effort should be made to stabilise exchange at as low a figure as possible, and they suggest that this can only be achieved either by a debased coinage, definite inconvertibility of the note issue, or, when absolutely necessary, a temporary refusal to encash the note issue.

(2) *Debasement.*—The Chamber are strongly of opinion that the first suggested course—debasement—should be definitely rejected at once. The expedient is not without its attractiveness, because it is an obvious way of ensuring the maintenance of the rupee as a token coin. But the objections to its adoption far outweigh anything that can be urged in its favour. The first result of debasement would necessarily be that all the old rupees would go out of circulation and would in fact disappear altogether as rupees, for it would be an altogether impracticable proposition to recall them from circulation when a debased coinage was instituted. The political effect of debasement also would be serious, and although there is undoubtedly a danger that inconvertibility in any shape or form will also have some political effect, this is not, in the opinion of the Chamber, likely to be so serious as would be caused by debasing the coinage.

(3) *Inconvertibility.*—A definite declaration by the Government of India that for the future they would not guarantee to give rupees for notes, a direct repudiation indeed of the undertakings that have been given on all currency notes since they were first issued, would in the opinion of the Chamber lead to such grievous political unrest and disturbance as to be also beyond the limits of consideration. For this reason alone they are prepared to reject the suggestion, while they are satisfied that a procedure of such an unsound character would do India infinite harm.

(4) *Temporary refusal to encash Notes.*—While therefore the Chamber are entirely opposed to debasement of the rupee or definite inconvertibility of the note issue they are prepared to face, in times of grave emergency, a temporary refusal to encash notes. If power so to refuse were given to the Secretary of State to be used only when the price of silver in the rupee rose and remained above the exchange value, he would be enabled to stand out of the silver market. The result would be a duel between the silver producers and merchants on the one side, and India on the other; and in view of the enormous share of the world's silver supply which India consumes, the issue would not, in the opinion of the Chamber, be long in doubt.

The dangers of such a procedure are great and the Chamber would not have it thought that they lightly accept the suggestion. But there are before them only two alternatives which they think worthy of consideration, and they are prepared to face this possibility of resort temporarily to inconvertibility rather than to see exchange fixed at so high a figure as seriously to damage the export and industry of India.

The bad effects of temporary inconvertibility could further be greatly lessened by the adoption of certain safeguards. The main safeguard would be a great increase in the metallic

portion of the Currency Note Reserve. Government could then announce that while, owing to the high price of silver, it was temporarily impossible for them to encash all notes submitted, they still had very large silver reserves and would continue to pay the salaries of their small salaried staff in rupees, would provide silver for payment of labour, would receive payment in notes for land revenue and all taxes, and as soon as possible would resume silver payment in full.

Another safeguard would be an ample supply of Re. 1 notes.

A third safeguard would be large stocks of small nickel coins ready for issue.

V.—Recommendations.

From the foregoing note it will be evident that the Chamber do not consider that by debasement, inconvertibility or any other expedient alone it will be possible to satisfy the requirements of trade. The requirements of trade demand stability at as low an exchange rate as is in present circumstances possible, and the Chamber believe that this can only be brought about by a combination of :—

(1) The readiness and power of Government to sell Councils or Reverse Councils to the extent of trade requirements within certain maximum and minimum rates.
(2) The recognition of the right of India to free importation of both gold and silver.
(3) The provision of an ample Gold Standard Reserve, of which a large proportion must be held in gold.
(4) The provision of a large metallic backing in the Currency Note Reserve.
(5) Power to Government to refuse encashment of notes temporarily as a last resort in the event of the price of silver rising above the exchange value of the rupee.

Without further knowledge of the silver markets and production the Chamber are not prepared to name a rate of exchange at which the securing of stability is possible, but they hope that it will not be found necessary to fix a rate higher than that ruling to-day.

Finally, before all other considerations the Chamber place stability.

June, 1919.

(e) *Letter from the Secretary, the Karachi Chamber of Commerce, to the Secretary to the Government of India, Finance Department, Simla, dated 25th June* 1919.

Referring to your letter No. 1368 F., dated 30th May, 1919, I am directed to ask that the Government of India will place before the Indian Currency and Exchange Committee the following statement, being this Chamber's views on the subject, taking the terms of reference enclosed with your letter as the basis :—

The effect of the war has been—

(*a*) an increase in the value of the metal of the token coin chiefly used in India, *i.e.*, silver, with the result that, as Government has—for coining purposes—continued to use silver almost exclusively, it has been found necessary to raise exchange as each material rise in the price of silver took place.
(*b*) to popularise the use of currency notes to a considerable extent, more especially in the case of large users of currency and the more educated classes.

For the small users of currency, however, and for the ignorant classes who form the bulk of the population paper money will not do, and, therefore, token coins—though not necessarily silver ones—will have to be provided. The idea still prevalent in many quarters that the native of India will only be satisfied with a token coin of silver has no arguments based on actual facts or past experience to support it.

It is therefore suggested—

(1) That the principle originally adopted whereby the token coin was worth intrinsically less than its face value be retained by the extension of the use of nickel and/or the adoption of some metal other than silver.

This will enable Government to materially reduce its purchases of silver and thus become in a great measure independent of the fluctuations of the silver market whilst still being in a position to supply metal tokens to a practically unlimited extent.

(2) The new token of metal other than silver should be coined of the face value of 4, 8, 12 annas, and it may be mentioned in this connection that the nickel coins of 1 and 2 annas now issued are daily increasing in popularity, even in the remotest country districts.
(3) Government should have power to release notes against any of the current token coins, and tenderers of notes should cease to have the right to demand silver coins only.

The profits which will accrue in the coining of the new tokens should be placed to a reserve, in the same way as was done formerly, with the profits on coining silver.

It is imperative for the success of this scheme that token coins should be kept available in very large quantities at all Treasuries, an extension in the number of which is essential (where no Treasuries or Sub-Treasuries exist and where it is not feasible to establish them, such duties of the Treasuries might be undertaken by the Post Offices).

If the foregoing suggestions are adopted, the internal currency system of India will be practically on the same basis as was the case when silver was adopted as the most advantageous metal for token coins at the time. Consequently, the sterling exchange rate in relation to rupees may again be fixed in London broadly on the same principles which used to guide Government before the war, when the policy followed ensured stability of exchange and was generally found satisfactory by the trade of the country as a whole.

As regards the rate at which Government should stand fast for the future, this Chamber do not consider that they are in a position to express an opinion at this juncture, as it will depend entirely on the conditions which will prevail in the leading money markets after the final conclusion of peace and on the world value of the sovereign.

(f) *Letter from the Secretary, the Indian Merchants' Chamber and Bureau, Bombay, to the Secretary to the Government of India, Finance Department, Simla, dated 26th June* 1919.

With reference to your letter No. 1189F of the 9th May 1919 I am directed by the Committee of this Chamber to send hereby their views regarding the Exchange and Currency questions for submission to the Currency Committee appointed by the Secretary of State for India.

II. My Committee are strongly of opinion that fixity of exchange within the gold points is highly desirable. Since 1893 the exchange policy of Government has several times fluctuated to the great detriment and loss of the producers in this country and has placed Indian industries at a great disadvantage because of the indirect support the raising of exchange has given to imports. The commercial community has time after time pressed upon the attention of the Government the extreme desirability of putting a stop to these fluctuations and to establish conditions which will secure a stable exchange without which the mercantile community would not be in a position to regulate its transactions. My Committee are aware that the present raising of exchange to 1*s.* 8*d.* has been due to the abnormal prices of silver and to the alleged *inability* of the Government to suffer loss continually on the issuing of silver rupees at the price of 57 and 58 pence per ounce of silver. Merely the raising of exchange by a penny or two is, however, only a palliative calculated to tide over the difficulties for a time and is not in the nature of things a measure which will permanently solve the difficulties of the situation. My Committee suggest, therefore, after careful consideration, for purposes of easing the difficulties of internal circulation, the introduction of a coin of the value of, say, Rs. 2/- or Rs. 3/- as token coin with so small a percentage of silver that there may be no appreciable loss even when silver is at 70*d.* and Government may be able to issue coins to any extent. It is only after serious consideration of the whole question that my Committee have suggested such a radical measure as they have come to the conclusion that to meet the present critical situation this would be one of the best remedies that can be thought of. To go on under the present circumstances without adopting any such measure will mean merely propping up a situation by unnatural manipulations of exchange disastrous in the interests of the country at large. The increase in circulation of rupees has recently been great owing, among other causes, to the increase of population and trade and the rise of prices coupled with restrictions on the transport of cash in silver. The rate of increase in the internal circulation of rupees has been so great that unless a measure on the lines recommended by the Committee as above is adopted, and that soon, the demand for silver coin will be still greater and the Government will be forced to purchase silver even at 60*d.* and perhaps 70*d.* On the other hand a mere talk of the introduction of a new token coin with a very small amount of silver will have quite a salutary effect on the problem as the silver producers and the silver manipulators would know that they could no longer force the hands of the Government of India, hitherto the largest purchaser of silver in the world. It may be confidently expected that prices of silver would be easier immediately on such an announcement. My Committee are, however, conscious that in a measure of such an exceptional character there may be numerous difficulties owing to the general ignorance of the public on currency matters. The whole programme for introducing this measure should therefore be thought out by the Government and the machinery explained to public bodies whose co-operation should be secured by every means such as was employed for raising loans during the war. Without fullest and frank public co-operation such a measure can only prove failure.

III. If this step is taken, my Committee would like the Government to go back as early as possible to the exchange rate of 1*s.* 4*d.* and to reach by every effort natural conditions under which the exchange rate would be maintained within the gold points. The greatest security for such maintenance is in a broad basis of banking enterprise in the country, supported at the top by a central national bank which would keep a central banking and currency reserve. Such a bank with a head office in India would be under the moral

influence of Indian financiers and business men and as early as possible the Secretary of State should see his way to get out of the management of the exchange and to leave the management in the hands of an institution of this kind capable of guarding Indian interests. My Committee feel very strongly the evils of a "managed" system in which all the defects of red tape are inevitable. These evils are, in the case of Indian currency and exchange, intensified by the pressure of London financial interests, not always to the advantage of this country. It is impossible to countenance, except when it is absolutely inevitable, the continuance of a system in which the controlling power lies not with those who live in India and who are directly concerned in the matter but with those who try to manage things from the standpoint of the London money market, the English Treasury and English financial and commercial interests.

The suggestion that the Secretary of State for India should come into the field of Indian exchange and currency management because of India's obligations in respect of political services, railways, &c., is untenable, since the Secretary of State could still draw as much money as is required for his purposes through the Central Bank suggested hereafter. The entire management of Council Bills should, in our opinion, pass out of the hands of the Secretary of State and be placed with the central bank with head office in Bombay and with a Board on which Indians should not form a minority.

IV. There is no doubt that currency notes have increased in popularity during recent years. But, in view of the fact that the poor and the ignorant have often been charged discount for the encashment of these notes, much remains to be done in the direction of removing some of the inconveniences and difficulties which prevent the currency of notes being welcomed in the rural districts by the masses. The withdrawal of extra-legal cashing facilities at district treasuries enjoyed by the public for many years before the outbreak of the war has been to a large extent responsible for much of the prejudice which exists against currency notes. These facilities should now be reinstated and, if necessary, further arrangement should be made at post offices for cashing currency notes and getting small change which is the real necessity to poor people in the mofussil. Taluka Cutcheries should also give facilities for cashing currency notes.

It need not be pointed out with regard to small change that in a poor country like India there is a great need for coins of small denomination freely issued to the public as the purchases of individuals are small and are in many cases far below even a rupee. Apart from free issue of small coins, attempt must be made to keep these in parity with the standard, viz., the sovereign.

V. It would also be desirable in the opinion of my Committee to issue currency notes against the backing of gold exclusively. The circulation of actual gold coins is against the accepted feeling amongst currency authorities everywhere. The demand for a gold mint and actual gold in circulation in India is based on the assumption that the establishment of gold standard and of natural conditions of exchange referred to above depend upon actual gold in circulation, but it would be pacified very largely by the acceptance of the suggestion in regard to gold notes. The circulation of gold notes would be helpful because, while for normal times these notes would be popular and would be largely in circulation, their encashment in gold being guaranteed, the gold reserve against them could, however, be utilised by an extraordinary Order in Council in times of internal or external crisis by the central bank.

Further, there is no likelihood of all the notes being presented at any particular time and gradually the fiduciary element may be increased with great advantage to everyone concerned. In this connection my Committee feel that the suggestion for permitting recognised banking institutions to issue notes side by side with Government notes is one which deserves consideration and may be examined. These notes may possibly be more popular than the Government currency notes and may induce many banks to open branches where they have none at present.

VI. The point which my Committee desire most to urge is the penalising of Indian exports by the raising of exchange and the undue advantage which it gives tc imports from foreign countries. The indigenous producer is very hard hit on account of this arrangement at a time when he is least able to withstand the strain. Under the circumstances, my Committee would suggest the imposition of a countervailing duty on all imports into India so long as, by causes which cannot be helped, the exchange has to be maintained at a level above 1*s.* 4*d.* My Committee feel that it is not with any desire to give any special encouragement to Indian producers, but strictly with a view to restore equitable conditions in regard to foreign competition that this levy should be put. They are aware that there would be an outcry against a suggestion of this kind, which seems to them most fair and which, while avoiding all the complications in regard to the settlement of exchange, is an issue quite apart calling forth immediate action on the part of Government. They cannot help feeling that there would arise a very great grievance among Indian commercial circles and a sense of very keen disappointment if nothing is done in this direction. It is impossible for Indian producers to countenance arrangements by which their calculations may be upset and find the Government unwilling to take some immediate measure, drastic as it may appear, for relieving them. My

Committee cannot overlook the extraordinary and, as it appears to them, unfair agitation, which was set up in Manchester when a small differential duty giving an advantage of only 4 per cent. to Indian textile manufacturers was levied under war conditions of an extraordinary character. While unwilling, therefore, to embarrass the Government with any serious agitation of this kind, it is the reasoned opinion of my Committee that only a step in this direction levying an import duty of 25 per cent. would cause general satisfaction amongst Indian commercial circles.

VII. The use of credit instruments in the form of cheques is still to be made popular in India and for this purpose my Committee would strongly recommend the abolition of one anna stamp duty on cheques which has, among other things, come in the way of this form of credit instruments helping to economise the general currency as it has done in several countries in Europe and America.

VIII. All these problems are inter-connected with the banking problem of this country, which can be briefly characterised as a paucity of banks. This itself is accountable for the so called hoarding if any exists, as the tendency to hoard arises simply because people do not have near at hand a convenient agency which will keep their money on deposit and turn them to good account.

In so far as the exchange situation is the result of the large demand for silver coin which has sent up silver prices, it is the opinion of my Committee that the existing currency in India is not fully used owing to lack of the necessary banking machinery. What is called hoarding is not hoards of wealth but currency which is used only seasonally and kept during slack period in private vaults in silver. The only radical solution is, therefore, to strengthen the banking institutions of the country. In a small country like France, the Central Bank has more than 500 branches. In the Bombay Presidency, an equally large area, the Presidency Bank has only about 14 branches.

Presidency Banks have hardly begun to realise the beneficent effects of the policy of opening more branches but the number of these branches is still small looking to the requirements of the country. Presidency Banks and Exchange Banks again have not been able to win the confidence of the Indian people owing to the lack of sympathy with the latter shown by their refusal to have Indians, however influential and wealthy, on the Boards of Directors except to a certain extent in the case of the Bank of Bombay.

IX. The goal of Government should, in the opinion of my Committee, be to reach by stages the establishment of a gold standard accompanied by a currency based on gold and it is therefore greatly regretted that the terms of reference to the Currency Committee mention as the specific object "strengthening of the gold exchange standard." The sovereign should be the unit of value and have a fixed relation to the rupee reduced to real tokens used in internal circulation and once the parity is established it should be maintained by all possible means.

X. Believing as they do that the gold exchange standard has proved from the beginning disastrous to the country and that in a gold standard only lies the salvation of the country, my Committee venture to give their views regarding some of the measures which are calculated when the suitable time arrives to make the gold standard a success in this country as it has been in others.

(1) Gold mint should be established in India on identical terms with those given to the British dominions. If the sovereign is not made the standard of India, India must have distinctive gold coin of her own, which should be minted free of cost without seigniorage as is done in the United Kingdom and the United States of America.

(2) Public opinion in India demands that both the Gold Standard and the Paper Currency Reserves should be entirely located in India. Government should publish every month a statement of interest secured on investments of treasury balances, Paper Currency Reserve and Gold Standard Reserve. It remains to be shown whether the cost of transport from India in case of an adverse balance would exceed the loss over a long period in interest on investments and indirect assistance to banking of the country generally.

(3) Council Bills must be sold for stated amounts, so long as the natural conditions are not restored and so long as the Secretary of State feels the necessity of using the machinery of the sale of Council Bills for the management of Indian Exchange. The India Council in consultation with the Government of India should from time to time issue a programme of the amount of bills to be allotted at each sale. These bills must be sold to all the applicants. My Committee are suprised to learn that banks with their head offices in India like the Tata Industrial Bank, the Alliance Bank of Simla, the Central Bank of India and others are not in the Secretary of State's list for the sale of Council Bills.

(4) My Committee have felt for many years in the past that the method and manner of purchasing silver for Indian currency purposes were not all that was desirable. In this connection they wish to endorse fully the remarks made by Mr. Dadiba Dalal in his evidence before the Chamberlain Commission, which are reproduced here in extenso (*vide* Appendix A[1]), because the conditions have not materially altered, in the opinion of my Committee, since these words were written :—

> What we want further to emphasise now is the need of strengthening the silver market in India and of utilising the indigenous machinery which is available. India is the largest purchaser of silver in the world, and silver operations through the London money market have only strengthened the banking institutions of London. The time has now come to view these things more from the Indian standpoint, and the continuance of the old policy of silver purchase cannot but be regretted as detrimental to the growth of a vigorous silver market in Bombay, which would, if unhampered, develop by its natural conditions and by the position which is occupied by India as purchaser of silver. The inviting of open tenders simultaneously in Bombay and London at stated intervals and for such quantities as can be ascertained in advance is a measure that must be immediately adopted. If these recommendations are given effect to, the cost to this country of silver purchase is bound to be reduced. All these improvements would in themselves allay many of the suspicions entertained by the Indian commercial circles, in regard to silver purchase operations.

XI. My Committee would also like to offer some other suggestions which they believe will prove useful in improving the working of the currency policy of the country :—

(1) Government notes and Government bonds must be printed in India. The art of printing in India has now sufficiently developed to justify Government in having these printed in this country. This will make currency notes available whenever there is a great demand for them.

(2) The Presidency Banks must be induced to allow cheques written in vernaculars.

(3) My Committee would like here to urge the necessity for the establishment of a State Bank for India. They venture to do so, though this question does not directly come in the terms of reference, as they believe that it cannot be separated from the other questions which are referred to the Currency Committee. The experience of my Committee of financial conditions during the war leads them to pronounce strongly in favour of this scheme. India is entering on a stage in her industrial life when she requires great financial resources at her back for the industrial development of the country. For this, and for the purpose of proper management of currency and exchange, a State Bank is urgently required. My Committee fear that this proposal will not have much support, but will perhaps be confronted with the opposition of the three Presidency Banks of Bombay, Calcutta, and Madras. It should, however, be pointed out that these three banks have done very little for the cause of Indian industries, and the manner and extent of the support given by them to Indian commercial interests leaves much to be desired. My Committee beg to point to the opposition of Calcutta and Madras Presidency Banks to having any Indian Director on their Boards. These banks are receiving large amounts from Government without interest, and it is but fair that they should be asked to look to Indian interests properly and to have an Indian element in their Directorate as recommended by the Indian Industrial Commission. My Committee favour the establishment of a national central bank. They feel that the question cannot be solved by any departmental negotiations or conferences of bank agents. The question must be viewed from the larger standpoint, and petty considerations should be eschewed. The Committee suggested by the Chamberlain Commission to consider the whole question of a State Bank should sit at once. In connection with this question of a State Bank, it is interesting to learn that in the year 1912 the then Labour Government of Australia decided to start a bank and did so with little paid up capital. Its capital consisted of its credit, that is the knowledge that it would never fail to repay money entrusted to it because it had behind it guarantee of the whole people of Australia. In the six years that have elapsed since its foundation the Government has attracted to itself deposits aggregating 70 million pounds sterling, whereas the other banks of Australia put together have deposits aggregating about 176 millions. This State Bank has attracted to itself, therefore, really one third of the banking business of the country.

[1] Page 75.

(4) Office of the Controller of Currency or the Financial Secretary must be in Bombay because—

(*a*) Bombay has the largest number of banks.
(*b*) It is the principal bullion market in the East.
(*c*) It is the principal discount market.
(*d*) It is the seat of the largest number of Indian merchant-bankers.
(*e*) It has the largest circulation of currency notes.
(*f*) It has a gold mint.

It is noted with deep regret that the chief Financial Officers of the Government of India pay only flying visits to such an important centre, and do not evince any desire to understand first hand the feelings in Indian circles in such matters.

Further elucidation of the points herein mentioned will be given by the witness who will officially represent this Chamber before the Committee.

APPENDIX A TO LETTER FROM THE INDIAN MERCHANTS' CHAMBER AND BUREAU, BOMBAY.

EXTRACT FROM THE EVIDENCE OF MR. DADIBA M. DALAL.

Re *Purchases of Silver.*

81. In making the following suggestions and remarks about the purchase of silver, I do not wish to associate myself in any way with the criticism of last year's purchases. My brothers, who attend to the silver department of my firm, are of opinion that Messrs. Samuel Montagu & Co. executed the Government orders placed in their hands with tact, ability, and secrecy. Whatever remarks I make regarding the structural defects of the London silver market, as viewed from the point of India, do not refer to any particular firm or individual.

82. *London Silver Market.*—The Marquis of Crewe declared in the House of Lords on 14th November 1912:—"Then the position as to the purchase of silver was made more "difficult by the fact that there were only four firms in the City of London who acted as "bullion brokers. The usual custom of the India Office had been to employ the Bank of "England to arrange these purchases. The Bank had commissioned two particular firms of "brokers of high standing, and intimated that if the purchases were made through the Bank "of England again they would feel bound still to employ the same firms." All these firms referred to are financially very powerful and hold the greatest silver monopoly known to the world; furthermore they act not only as brokers but also as dealers and merchants. Each day they meet and jointly declare the "fixing price" of silver.

83. *Indian Silver Markets*—Dr. Henry Deutsch in his book on "Arbitrage" (1910 edition) states:—"The most important silver market in the world is Bombay, with which the silver "market in Calcutta cannot compete in the least." The European side of the Bombay silver market is composed of nine powerful Exchange Banks, who employ three firms of brokers. On the Indian side are the principal joint stock banks, 150 associated shroffs or merchant bankers, 15 bullion dealers, 11 dealers in cut bars and country silver and about 1,000 jobbers and speculators, all of whom do business through some 100 Marwari brokers. The combined force of the different sections of the Bombay silver market is therefore considerable, the market is broad and natural, and there are no combinations or understandings amongst dealers or brokers. Besides Bombay, there are other silver markets in India, and there are several thousand money dealers all over the country who take a share in the distribution and operations in silver.

84. *Regular Purchases Desirable.*—The present frantic and unbusiness-like method of making intermittent purchases of silver should be abolished and the Indian Government should buy regularly in future to an extent to be defined in the Budget; if any additional silver currency is required then it should have discretion to invite supplementary tenders.

85. *How to purchase India's Silver.*—The Government of India should direct the Mint Master of Bombay to invite tenders every fortnight for stated amounts of silver, and give the tenderers the option of delivering the bullion within 45 days from the date of the acceptance of the tender. This will place at the service of the Government of India any free silver that exists in the Bombay, Calcutta, London, New York, Paris, Amsterdam, Hamburg, Hongkong and Shanghai markets. Furthermore, it will be an equitable arrangement in which the whole world can participate. The four London bullion firms have agents and correspondents in India through whom their tenders can come in, and if they elect to open offices in Bombay they are sure to receive a most hearty welcome from all sections of the money market. The advantage of regular purchases in Bombay will be that the Indian Government will not only secure silver at a reasonable price, but also make their purchases at the average rate of the year and secure delivery at the very door of the mint.

86. *Opposition of the India Office.*—For the last 13 years the India Office has disapproved the purchase of silver in India by the Government. There is no explanation why 47,000,000*l.*

were purchased exclusively in London when on several occasions large blocks could have been secured in the Indian markets.

87. *Duty on Silver.*—In the first and second paragraphs of my Statement VIII. on "How to abate India's demand for gold," I have referred to the silver duty and to the silver warehousing questions. The duty on silver is unfair and is resented by the merchants connected with the China trade as well as the bullion dealers and native bankers in India. It is my opinion that this duty should be abolished entirely, as it prevents an outflow of silver from India to the neighbouring silver centres of the Far East and gives the London silver market an unfair advantage over the Indian silver market.

(g) *Letter, dated June* 1919, *from the President, Marwari Chamber of Commerce, Bombay, to the Secretary to the Government of India, Finance Department, Simla.*

I have to acknowledge thankfully receipt of your letters Nos. 1324 F dated the 26th ultimo and 1367 F dated the 9th ultimo and to inform you that this Chamber has the honour to forward the following as a written statement of its views:—

My Committee beg to submit that the exchange rate has been at present raised from 1*s.* 6*d.* to 1*s.* 8*d.* It is not the raising itself that has caused a stir and commotion in the general market of this country and that has led the merchant to fear that trade will be dislocated, but it is the fluctuation of the rate of exchange on which depends to a great extent the uncertainty of that market. The exchange policy of the Government is changing ever since the year 1893 to the great detriment of producers of raw materials, putting Indian industries at a great disadvantage in the general competition of markets of the world. It is necessary to point out that, at present, prices of food and other necessaries of life have gone so high that labourers and daily wage-earners cannot buy sufficient food for a proper diet; and the present circumstances continuing, there is no hope for reduction.

2. The not raising of the rates of exchange, again, is tantamount to increasing prices, including of course the prices of Indian commodities to the foreign buyer; as also to a certain extent, not lowering prices to the importer of India. This means that export would decrease and import trade increase and at the same time it signifies that the profits of exporters and intermediate merchants would be reduced—the effect would be telling on cultivators of cotton and seed-wheat, as a necessary consequence. India is a producer of raw material, and hence she has to depend on her considerably large measure of export; and hence too it is necessary that the price of silver must always fix a minimum for the rate of exchange; in fact, the fixity of exchange within the gold points is highly desirable.

3. Moreover, my Committee would strongly protest against any policy that bases exchange on the price of silver, in so far as it is calculated to create continual uncertainty about the future of the rate of exchange, which is always condemned as bad for foreign commerce. They point out the situation that unfortunately took place in 1873 when India suffered heavy financial losses; and that if it is proved by now to be a mistake it is but advisable and expedient to correct it at this stage; and it is essential for the prosperity of trade to fix the rate of exchange once and for all so as to put the Indian currency on a final and permanent basis.

4. Practically, all the great countries of the world have for many decades at least coined silver on the basis of an intrinsic value equal to 60*d.* per ounce; this it is that checks the market price of silver from rising more than two or three pence above this rate. On the question of adopting a policy of giving a natural permanent fixity to the value of the rupee for foreign exchange, my Committee would lay greater emphasis than on introducing gold in circulation.

5. The exchange question is highly important to the Indian economic interests, and my Committee deem it worth while to point out that Indian exporters will in a majority of cases insist upon being paid in metallic currency and not by trying to adjust trade balances by extending the credit system and paper currency. The abnormal demand for silver as a medium of exchange would not very likely cease, and so silver would not be governed by the ordinary law of supply and demand. The ryots, moreover, cannot be expected to adopt on the spur of the moment the modern system of credit, and in the meantime the rate of exchange would adversely affect the Indian trade.

6. Besides, this naturally leads to the banking problem. There is a remarkable paucity of banks in this country and that is regarded as one of the possible reasons of hoarding in India. There is, at the same time, an appreciable necessity for introducing small coins—that is to say, coins of small values might be issued to an advantage.

7. Lastly, my Committee, without even brushing the fringe of controversial matter, beg to suggest that gold must be the standard value in this country as it is all over the world; and that gold should be freely exchanged in internal and external trade so that paper currency would be freely converted into gold, if and when it be necessary to do so; then that is best calculated to promote the economic interests of India in all possible ways. For a nation must have (1) a stable rate of foreign exchange; (2) a free mint, and (3) an adequate supply of currency; as suggested frequently—which denotes that it is not bi-metallism but the almost universal adoption of the gold standard as it prevails in the civilised countries of the world.

(h) *Letter from the Secretary, Upper Indian Chamber of Commerce, Cawnpore, to the Secretary to the Government of India, Finance Department, Simla, dated 1st July* 1919.

I am directed to refer to your letter No. 1189 F., dated the 9th May, on the subject of the future exchange and currency policy of the Government of India.

The Committee of this Chamber do not propose in the short time at their disposal to enter upon a detailed review of the question, but will content themselves by making a few observations on the position as it appears to them at present.

The recent rise in exchange has had an unsettling effect on the export trade of the country, and, whatever rate of exchange may be ultimately agreed on for the future, my Committee would like to emphasise the necessity for a stable exchange. In the words of the Chamberlain Commission, "the establishment of the exchange value of the rupee on a stable basis has been and is of the first importance to India."

While the future of exchange is still in the balance, my Committee would urge upon Government the extreme necessity of securing fixity, and announcing the same, for a period of, say, three to four months, by which time it is assumed the Currency Committee now sitting will have issued their report. In the absence of this, the export trade is in a quandary, and their difficulties are greatly increased owing to the present tedious cable delays. With a prompter cable service, some of the uncertainty which now prevails would be minimised.

It is early yet to say what permanent effect would be produced on the export trade of India by a permanent raising of the exchange to, say, its present level of 1*s.* 8*d.* per rupee. When exchange was raised to 1*s.* 4*d.*, the ruin of the cotton and tea industries was prophesied, but under a stable exchange both industries prospered.

My Committee are not without hope that, at the present level of exchange, imports will be stimulated, which will tend to redress the balance of trade and bring rupees into circulation.

The development of banking facilities will, my Committee fear, be a slow process in tempting rupees from the hoards, but none the less a beginning should be made.

The insatiable desire of India for the precious metals, and in particular for silver, raises the question whether Government is justified in catering for this silver demand at the price it has to pay for the metal.

My Committee are reluctant to suggest inconvertibility as a remedy, but they see no other alternative if India, as the largest silver buyer, is to be spared becoming the plaything of the silver speculator, and if silver has to be bought at the speculator's price. While it may be said that the people of a country should have the currency that they want, a limit must be imposed when it is found that the want is too costly.

With inconvertibility the Government would be in a strong position, and to a very great extent would be able to make the market price.

When opportunity favoured, substantial purchases could be made and convertibility restored.

(i) *Letter from the President, Bengal National Chamber of Commerce, dated 8th July* 1919.

I have the honour to submit, under the instructions of the Government of India, the views of the Committee of the Bengal National Chamber of Commerce on the questions of exchange and currency policy of the Government of India, which will come up before the Currency Committee appointed to advise Government on the above subjects.

The volume of trade, both imports and exports, has fallen off considerably as compared with the pre-war period on account of the restrictions imposed on trade, the transport difficulty, and the abnormal rise in prices; but though trade was less, the money value of both imports and exports rose to the average of five years preceding the war. The trade balance in favour of India was usually met by imports of gold and silver and by Council Bills.

During the war the Government of India met their liabilities to the Home Government by paying from their funds here for the large purchases they made on behalf of the Home Government. So there did not exist the necessity of issuing Council Bills for their legitimate purpose. But a very large number of Council Bills were issued to afford facilities to the export trade of India as the import of gold and silver was restricted. In this way, and by the transfer here of Government securities held outside India, a large portion of India's trade balance was paid for.

For several years the exchange remained undisturbed at 1*s.* 4*d.* The disturbing factor set in in 1917 owing to decrease in the output and the consequent difficulty of obtaining silver The situation was saved by the generous offer of the United States at a fixed enhanced price, and the rate of exchange here was raised from 1*s.* 4*d.* to 1*s.* 5*d.* with a view to allow the Secretary of State to make purchases of silver at a covering price. Since then, owing to the upward movement in silver, the rate of exchange has gone up, and it now stands at 1*s.* 8*d.*, and there is no knowing how far it may go up still. This great rise and uncertainty about the future are having a detrimental effect by hampering the export trade of the country. The

question naturally arises how provisions could be made to prevent fluctuations in rate, as a fixed rate is absolutely necessary for the well-being of the country. It has been solved by Germany by demonetising silver, and the other European countries have followed suit, though some of them use coins of other metals besides gold as subsidiary to a limited extent.

In India gold and silver coins were issued together from time immemorial at a fixed rate of value till the time of the East India Company, when, on the discovery of large deposits of gold in California and Australia, Lord Dalhousie's Government completely demonetised gold in 1853. But after a few years most of the great European countries adopted gold as the chief monetary tool, while silver rupee was retained as the standard and the principal metallic tool for India. As India has a very large annual liability to pay in gold, her position became serious owing to a heavy fall in the value of silver. With a view to meet the situation, the Indian mints were closed to the free coinage of silver, and the gold standard was introduced on the recommendation of the Herschell Commission (1893), appointed to investigate into the matter. Both the Herschell Commission (1893) and the Fowler Committee, which was subsequently appointed in 1898, recommended gold standard and gold currency for India. Gold standard has, however, been adopted, but, on the recommendation of the majority of the Chamberlain Commission, the gold currency has not been introduced; the adoption of the former without the latter has now conclusively proved futile.

It should not be considered out of place to remark that, either by a serious disturbance in the ratio of value of gold and silver, or by the action, legislative or otherwise, of any important country, periodical fluctuations in exchange are inevitable. Such fluctuations paralyse trade. India suffered a serious loss by the depreciation of her silver rupees and bullion at about the close of the last century; but though appreciation has set in, yet she will be practically no gainer, as she has no foreign markets for exchange of her silver. On the contrary, she is suffering serious loss in having to buy silver bullion at an enhanced rate from foreign markets for minting her requirements of silver coins.

Now the question resolves itself to this: how India is to be saved from the excess payment of value? Various methods have been suggested, and the one amongst others is that the rupee should be substituted by inconvertible paper currency. This was introduced in a modified form last year and the monetary crisis was averted; but it is a matter for serious consideration whether inconvertibility would not create a suspicion in the minds of the agricultural classes about the solvency of the Government. By organised efforts the jute and a portion of the rice trade was financed by currency notes of smaller denominations in place of silver coins, but the regret was that notes of smaller or higher denominations could not be converted into cash without a heavy discount which resulted in loss to the ryots. So it would be a serious blunder if inconvertible currency notes were forced upon the people of India. The proper remedy, in the opinion of my Chamber, would be to adopt the recommendations of the Herschell Commission and the Fowler Committee, not only for a gold standard but for a gold currency. An apprehension is always entertained that the gold coins would be largely absorbed as soon as they were coined and there would be no way of bringing it back into circulation. To the Committee of the Bengal National Chamber of Commerce the hoarding of silver or gold in India seems to be a misconception. So far as their information goes, in Bengal at least, the ryots have absolutely no hoard; what silver and gold ornaments they have are not worth taking notice of. The middle classes generally deposit their savings in Post Office Savings Banks, but the ladies of their families have some silver and gold ornaments. Wealthy people deposit their money in the banks, and their female members have, no doubt, ornaments made of gold or gold and precious stones. If there had been a hoard, Government would not have to provide money to the ryots on the first sign of a famine in order to keep them alive. The Committee have their doubts as to how much of the trade balance shown in India's favour in the statistical returns really belongs to her, and how much goes out of the country through individuals, firms, railways, banks and others.

The note appended to the Report of the Chamberlain Commission by Sir James Begbie is to the point, from which an abstract is given below :—

"Up to the closing of the Mints in 1893 to the free coinage of silver the public had been accustomed for generations to full value coins for their currency requirements, and they are not now prepared to hold their profits and savings in the form of over-valued rupees. Hence their preference for gold, both coin and bullion. I am, therefore, unable to agree that the habit is one which should be regarded as inevitable in Indian social or religious conditions and not susceptible to treatment. The statistics show that great progress has been made in attracting the cash reserves of the people into useful and profitable channels, such as investments and deposits with banks. But they also show this later reversion to hoarding on an extended scale, which is thus a retrograde movement, indicating a greater and not unnatural desire for solid security than for profitable returns on investments in a currency medium which does not provide the kind of security now clearly preferred. It seems to me that it is not to the interest of India to have its rapidly accumulating wealth diverted into idle hoards by the token currency policy."

However, with regard to the question of absorption, it is no doubt to the interest of India if the would absorb gold coins which have ready markets outside India than silver coins which have no such ready market. The eagerness with which gold coins are now absorbed in India

will, it may be reasonably presumed, disappear when the people will find the gold coins always and everywhere readily available in exchange for currency notes and other token coins. The commercial and the educated classes prefer to use currency notes in place of coins. With the spread of education and development of commerce and industries such preference will gradually be shown by the masses as well, and, in time, internal transactions will be conducted generally by currency notes. An arrangement under which currency notes could be exchanged at par for gold coins will go greatly to stimulate their circulation.

The Committee of the Chamber therefore recommend that the gold currency be introduced in India without delay and that the mints of India be opened to the free coinage of gold of the denominations of Rs. 15 (sovereign), Rs. 7½, Rs. 5, and Rs. 2½ value. Nickel 8-anna and 4-anna pieces should be coined in place of the present silver 8-anna and 4-anna pieces. In this way silver requirements of India might be effectively restricted and India made practically free from the disturbing forces arising from the rise and fall in the exchange.

It would not be out of place here to mention that the Government have pledged themselves to the policy of developing industries in India, and large industries are already being established in the country. This will go materially to increase the trade balance in favour of India, and under the programme of the constitutional reforms the transfer of funds from India to the Secretary of State for various purposes will in some cases diminish. The cause of industrial development will make a pressing demand on the Government for the establishment of a State Bank in India, and consequently the Paper Currency and the Gold Standard Reserves and the cash balances of the Government of India will have to be largely retained in India and placed at the disposal of the State Bank, and all these will go to restrict the issue of Council Bills payable in India. Under the circumstances it would be to the advantage of all parties concerned to introduce gold currency in India without, however, demonetising silver for the present, the further minting of which should be restricted, and silver coins of all denominations should be restricted legal tender.

(*j*) *Letter from the President, Southern India Skin and Hide Merchants' Association, Madras, to the Government of India, Finance Department, dated the* 18*th July* 1919.

I have the honour to communicate to you the following Resolution passed unanimously at the last Meeting of the Association :—

"Resolved that representations be made to Government requesting that (*a*) the exchange value of the rupee be fixed definitely, (*b*) the rate be fixed as low as possible, and (*c*) free importation of gold be permitted into India."

2. This Association views with grave misgiving the sudden raisings of the rates of exchange upsetting free flow of commercial dealings and creating uncertainty in commercial circles, thereby adversely affecting the trade and commerce of the country. It is absolutely necessary therefore to have the exchange fixed definitely subject of course to fluctuations with due notice, when circumstances imperatively demand it.

3. India's exports are much larger than her imports, and so it would be better for India that the exchange is fixed at as low a level as possible. Furthermore, imports can be said to be dependent to a large extent on the exports, *i.e.*, the products and manufactures of the country, and higher exchange is likely to discourage and reduce production and manufacture where the margin between cost and foreign market value is small. Whereas a lower exchange would encourage production and manufacture and thus increase exports which would in its turn react favourably on imports.

4. Furthermore, higher exchange will seriously handicap Indian manufacturers in their competition with foreign manufacturers of gold standard countries.

5. The Indian Treasury may save a little by higher exchange, but that is nothing when compared to what India will benefit by way of larger production and manufactures encouraged by a lower exchange.

6. There is a great demand for silver all over the world, so much so that the demand is much larger than the supplies available, which latter have been affected by the unsettled state of Mexico for some years past, while the late war has increased the demand for same. Consequently, if the importation of precious metals into India is divided up between gold and silver, the strain on silver will to a great extent be relieved.

7. In this connection we would point out that the proposal to make currency notes inconvertible or the debasement of the present rupee coin would not only not prove a remedy but would make the situation worse. The inevitable result of the adoption of these retrograde proposals would be that the ignorant masses of the people would become panic-stricken and the rupee coin would either come to be hoarded or go into the melting-pot.

8. We therefore strongly press for a stable exchange at as low a level as possible and for a free importation of gold into India.

(*k*) *Letter from the Secretary, the Millowners' Association, Bombay, dated 5th August* 1919.

The Committee of the Bombay Millowners' Association desire to submit their views on the exchange and currency questions which are now being considered by your Committee.

2. It is an indubitable fact that the war has seriously disturbed not only the various pre-war systems of exchange and currency in vogue in the countries of the belligerents, but in those of the rest of the world, inclusive of India. My Committee presume, however, that so far as India is concerned, those effects will be fully investigated and reported upon by the Currency Committee, and they therefore confine their observations to the modifications that may be required to meet possible future variations in the price of silver and to the general policy which Government might adopt in order to ensure a stable exchange.

3. I am to observe at the outset that it would be hazardous at the present stage to forecast with any degree of confidence the possibilities of silver in the near future. It is not yet known with anything approaching accuracy what may be the ultimate world's demand for the two precious metals, not only for purposes of reparation and reconstruction, but for fresh industrial development and enterprise. It is problematical how far the countries, England, France, and the United States excepted, which during the pre-war period were users of gold, will be able to resume gold payments. The annually decreasing production of gold has been considerably exercising the minds of financiers and economists. It is questioned whether the supply from the existing mines will be found sufficient to recuperate all destroyed industries. It has even been asserted that gold monometalism is at an end. The poverty of the ruined belligerent States will prevent their being in a position to spare the means of acquiring gold in bulk when prices are normal. It is further averred that in the near future a larger use of paper money will be inevitable. If these statements so generally made, could be postulated, it stands to reason that in practice the value of all paper money will be based on the value of silver. Anyhow it is reasonable to assume that gold will grow scarcer (unless new productive mines are soon discovered), leading to a high premium which will forbid a condition of free gold currency as was to be witnessed during the pre-war period, specially from 1898. My Committee are therefore of opinion that it is of the utmost practical utility in the first instance to ascertain :—

(*a*) What is likely to be the actual visible supply available of the two metals ;

(*b*) What are the immediate prospects of the production of gold and silver from the existing mines ; and

(*c*) What is to be approximately the amount of paper currency, convertible or inconvertible, or both, circulating not only in England or France but in the Continental States, now reconstructed or under reconstruction.

4. Without a fairly correct knowledge of these crucial data it is not possible to offer any definite opinion on the lines on which Indian Currency should be firmly placed. My Committee understand that the difficulty which has for some months past been experienced by the Government is in reference to the dearer price at which considerable quantities of silver for coinage have had to be purchased. Paper currency had to be expanded to meet both the requirements of the State in connection with the war here and in England, and those of trade owing to prices of staple commodities having considerably risen. On 7th April 1918, the gross circulation of notes was 93·04 crore rupees with a metallic currency of silver and gold in this country of only 10·94 crores or 11 per cent. In the following June silver coinage had run down dangerously low, creating great apprehension, though it was fortunate that there were about 19 crores of gold and about 2·49 crores of silver under coinage. Fortunately at the end of August of that year the Government were able to replenish their dwindling stock of silver and bring it up to 11·18 crores with a gold backing of 20·32 crores. The process of increasing silver in all its forms has steadily gone on since, pari passu with further expansion of notes from time to time, so that on 30th June last the gross circulation of notes was recorded in the official return at 162·76 crores to back up which there was metallic currency and bullion to the amount of 62·17 crores, equivalent to 38 per cent. Thus the dynamics of Indian State Currency so far clearly indicate the larger quantity of silver that has to be necessarily purchased to meet the growing requirements of the country. Silver prices, meanwhile, owing not only to the larger demand of India and China but of other countries also, have moved considerably higher. Silver advanced to 43½ pence per oz. and Government were obliged to change the exchange value of the rupee in gold from 16 to 17 pence. That was the beginning once more of unstable exchange. The stability which was fondly imagined would continue for years gave way before the force of events. Later on, say on 11th April 1918, the rupee value had to be fixed at 1*s.* 6*d.* and recently at 1*s.* 8*d.* Thus the previous stability has been greatly disturbed, and it is problematical when Indian exchange may again attain stability under the new monetary conditions the war has brought in its train.

5. The difficulty of the solution lies in reconciling the requirements of an adequate metallic backing with a stable exchange. No doubt, it is conceivable, nay probable, that in certain circumstances the two factors may prove antagonistic. For the purposes of further providing metallic currency for the requirements of the State my Committee venture to suggest the removal of the embargo on silver and gold imports. It is notorious that for months past

no sooner silver is coined and put into circulation than it disappears to a very large extent with the net result that notes, particularly in remote districts and towns, can be encashed only on paying a premium. This exaction of premium by shroffs and others was naturally the subject of more than one interpellation at the last two meetings of the Imperial Legislative Council. Such a situation is indeed most embarrassing. My Committee admit that it would be embarrassing to any country, however rich. There is a very confident belief among the masses that the scarcity of silver, would, later on, lead to a still greater enhancement of the metal. If they were hard hit for years after the closure of the mints when their silver possessions were reduced 50 per cent. by a stroke, they now think that the contrary may happen and silver may come back to its own and recoup them for the losses. The belief is not unnatural. This my Committee take to be the chief cause of the rupees so swiftly disappearing soon after their being put into circulation. Were the embargo removed, there is not the least doubt that the secreted hoards would to a considerable extent come back into circulation. It is, however, apprehended that the effect may be to increase the price of silver, but my Committee are of opinion that after a few weeks, adjustment would take place and silver would find its own natural level of price consistent with demand. Meanwhile, with the release of rupees, as the effect of the removal of the embargo, Government for some time will have no need to be in the market for any silver, and inasmuch as India is the largest consumer, it is reasonable to suppose that with a subdued demand, prices may fall. If, again, at the same time the Government take the wise precaution of putting a fair amount of one rupee notes into circulation, there is every probability of silver reaching a fairly normal level.

6. To decide on a par of exchange which will not operate with injustice or hardship on the one class or the other is a matter which cannot, in the opinion of my Committee, be solved off-hand. Modern exchange, which is the result of modern international trade, imperatively demands an International Exchange Commission. Any other isolated method of determination will prove unsatisfactory, and liable to violent disturbances whenever there is a conflict in the value of the two metals wrought by economic world factors. From this point of view it is highly expedient in the monetary interest of the world at large that a ratio should be fixed by international agreement that shall operate without dislocation and without any injustice either to creditor or debtor nations—a ratio that can be practically worked with little interruption, such as the one that was in force for well nigh five hundred years prior to the demonetisation of silver by Germany and other States. There can be no permanent solution of the difficulty which faces the Indian Government at present until an International Commission is appointed, able to fix a ratio between the two metals which can ensure stability. To offer any constructive policy during the present period of financial and economic transition can hardly be decisive. At the best only a tentative method could be suggested till the transition period passes away and the world of trades and industries regains normality created by post-war conditions. The tentative suggestions my Committee venture to offer are as follows, but at the best it is felt they can only be in the nature of palliatives.

7. The crucial point which has to be borne in mind for the purpose of stabilising exchange is to bring to an irreducible minimum, so far as it is possible and practical, the purchase of silver for the requirements of Government from time to time. The removal, to a limited extent, on well defined conditions, of the embargo on gold will also, my Committee believe, go some way to achieve the same object. The balance of trade which debtors to India have to adjust can be adjusted by means of gold bullion. Japan and America are the chief countries which can be easily made to adjust their balances by this method. Government might buy all this gold bullion which may come at certain prices to be specified, and give in exchange gold bullion certificates of a negotiable character that may be encashed only at the pleasure of Government. Thus with gold having a free circulation but leading to no bazaar speculation, the need of silver should be greatly obviated, while trade itself would in no way be disadvantaged or inconvenienced. My Committee do not suggest that such gold certificates should be issued to other than recognised or licensed bankers and merchants. There cannot be, under these conditions, any repetition of the undesirable and embarrassing speculative phenonenon that was witnessed when Government allowed gold to be issued from the Currency Office in Bombay. On the other hand, there is in every way a probability of this mode of adjustment of large mercantile and banking transactions becoming popular. There will also be the chance of considerable economy being attained in the use of the metal.

8. The extensive use of gold certificates in the United States is well known and familiar. The method is suggested only as a last resort. But if the experiment is to be tried, it is to be hoped that it will be given so far as possible a fair chance of its utility being properly tested. In connection with this subject of gold, my Committee would recommend that the greater part of the gold which is kept in England on account of the Paper Currency Reserve might be brought to India unless Government consider it an obvious advantage to allow it to remain where it is as was well pointed out by Mr. Clayton Cole in his evidence before the Chamberlain Commission.

9. My Committee cannot refrain from expressing their strong opinion on the continuance of the sound and healthy policy pursued by the Government for years past, namely, every expansion of notes in future, as in the past, being fully backed by metallic currency. It is

the ready convertibility of notes into rupees which has been so wholly contributory to the financial credit and prestige of Government in a country where they have to provide metalli currency for the domestic economy of millions of the illiterate masses. There should never be any deviation from that tried policy. Inconvertibility of notes would be highly disastrous to that credit and prestige. Neither should there be any tampering with the existing coinage. Having regard to the fact that at a very rough estimate India possesses 400 crores of rupees it would be exceedingly unwise and most uneconomic to make any change whatsoever in the fineness and standard weight of silver coins or to allow to go into circulation coins of any new design. India must be rigidly kept free from the operation of the Gresham law.

10. Lastly, my Committee desire to point out that a high rate of exchange has proved from past experience to be generally prejudicial to the sound and healthy progress and development of textile industries, especially cotton, in this country. A reasonably low rate of exchange consistent with normal conditions of silver in the near future, is much to be preferred. Of course, in the present unsettled economic condition of many a State in the world it would be premature, my Committee repeat, to say what rate of exchange would be deemed reasonable. That will ultimately depend on an accurate ascertainment of the potentialities of the production of the two metals with settled financial and economic conditions of the world. The key of the situation must inevitably lie in the rate which may be fixed for stabilising exchange. That being the crux of the question my Committee are of opinion that the rate should be such, bearing in mind all existing world factors of silver, as shall make it possible for the Government of India to import metal for the coinage of rupees otherwise than at a loss.

(*l*) *Memorandum submitted by the United Provinces Chamber of Commerce, dated 9th August* 1919.

EFFECT OF THE WAR.

Briefly speaking, the effects of the War on the Indian currency, exchange and the position of the note-issue, and the causes thereof, have been :—

1. A series of good crops, very high prices paid for Indian produce by the foreign buyers, heavy purchases of the Indian Government on behalf of the Home Government, which stimulated production—all these factors combined to create an abnormally large demand for currency.

2. This demand was for both rupees and notes. (Other forms of "paper-credit," *e.g.*, cheques, bills, &c., did not play as much part in the liquidation of transactions as under similar circumstances they would have done and did in some of the European countries.)

3. The unwillingness of foreign buyers of our produce to pay for the same in gold, coupled with the embargo on the import on private account of the precious metals also contributed to this demand.

4. In meeting this continuous and insatiable demand the silver reserves of the Government were steadily depleted. Government borrowed rupees freely from the Paper Currency Reserve to finance their purchases. Ordinance after ordinance was passed raising the fiduciary portion of the Currency Reserve and the convertibility of the note-issue was seriously threatened.

5. Rumours—not without foundation—of Government's increasing inability to meet their liabilities on the note-issue coming with the restrictions of facilities for encashment aggravated matters and created a distrust of notes at the very time when trust in them was most needed. It is the utmost trust of the English public in the Bank of England which at times of acute financial crisis has saved England from national bankruptcy.

6. News of British reverses in the war and the consequent distrust in the stability of Government and of the banks, &c., led to the withholding from the money-market of rupees which in normal times would have found their way there.

7. The rising prices of silver steadily raised the bullion value of the rupee. It no longer remained a token coin but on the other hand its bullion value rose above its face-value. Gresham's Law came into operation and large amounts disappeared from circulation and swelled the hoards or found their way to the melting pot, prohibitive legislation to the contrary notwithstanding.

8. To meet the demand for more and yet more rupees and to provide an adequate metallic backing for the note-issue heavy purchases of silver were necessitated. It is doubtful whether the Secretary of State and the Government of India were fully alert. Perhaps it was possible to anticipate matters a little more in advance and effect purchases at less ruinous prices. Much inconvenience and loss would in that case have been avoided. The experience of 1905 should have made Government particularly careful.

9. Silver was scarce in the world-market, prices were ruling high, India's heavy demand stiffened the prices still further. America came to the rescue. Melting silver dollars lying idle in her reserves she supplied us with silver and saved the Indian Government from impending bankruptcy.

10. Rupees coined of silver purchased at such high prices and sold at 1*s.* 4*d.* meant a distinct loss to the Treasury. The sterling exchange was raised to 1*s.* 5*d.* America sold us silver at one dollar an ounce, this price formed the basis for fixing the exchange at 1*s.* 6*d.* This had further to be raised to the present rate of 1*s.* 8*d.*

The Present Position.

Silver prices continue high and show no tendency to decline; the uncertainty about the future of the exchange is having a very unsettling and prejudicial effect on trade; exchange banks decline to buy or sell bills—especially forward bills—without full cover; demand for Council bills continues unabated; Reverse Councils cannot be sold, the silver reserves of Government, though, of course, much higher to-day than during the anxious months of April or June of last year, have got to be substantially improved; the fiduciary portion of the Paper Currency Reserve stands at a figure justifiable only during the desperate time of the war and must be brought down, if not to the pre-war figures, to much more safe and normal proportions —these are some of the main features of the present exchange and currency problem.

Recommendations.

While there is a more or less general agreement as to the diagnosis of the trouble there are wide differences of opinion in the matter of suggested remedies. Chief interest centres round the rate of exchange. Some of the courses suggested may be examined here in brief:—

It is opined in certain quarters that the Gold Exchange Standard should be abandoned or at least indefinitely suspended and the exchange left to its own fluctuations, in other words it should be left to race up and down with the price of silver. This is claimed to be the only way to ensure convertibility. Nothing, however, could be more harmful to trade than the course suggested. It cannot be too strongly insisted upon that to our trade stability of exchange is of paramount importance. The stability of the rate of exchange matters much more than the rate itself. Moreover according to its terms of reference the Currency Committee is to "make recommendations as to the policy to be pursued with a view to *ensuring a stable gold exchange standard.*" Any suggestion, therefore, that aims a direct blow at a "stable gold exchange standard" must be ruled out of court.

Another course suggested is the debasement of the rupee, the amount of silver in the new-coined rupee to bear the same proportion to the amount in the present rupee as the pre-war prices of silver bear to the present prices of the commodity. This would be an excellent expedient if the colossal amount of rupees circulating at present could by a miracle be withdrawn from circulation or else transformed into debased coins, the excess of silver in them coming, say, to the State Treasury. As this miracle cannot be brought about and we are not starting on a clean slate, the expedient is hardly workable. The existing rupee would rapidly go out of circulation, more rapidly than its debased brother could be minted. As it is, large amounts of rupees are being melted or hoarded; to say that the position would be much worse if the debased coin is introduced would be putting it too mildly. The remedy would indeed be worse than the evil. The effect of such a measure on the ignorant public, who understand nothing about the Government currency difficulties, and the consequences when silver prices assume more normal proportions should not also be lost sight of.

Yet another alternative put forward is that the sterling value of the rupee should, once and for all, be fixed so high (a 2*s.* 6*d.* rupee is suggested) as to make the exchange independent, at one stroke, of the rising prices of silver, the highest prices of silver imaginable being taken as the basis for calculation. The advocates of this view do not obviously seem to take into consideration the great possibility of silver prices falling down and the relative values of gold and silver, coming back—in the distant if not the near future —to the vicinity of the pre-war levels and the consequences of such falling down of prices and adjustment of values. The rupee will, in that case, be an abnormally over-rated coin and all the evils attendant on such currency will appear in an acute form. Incidentally a death-blow will be dealt to India's cherished desire for gold as the preponderating circulating medium of exchange.

The Committee of the chamber are not in a position to say anything with authority about the future of silver; but it is their considered opinion that the present prices, though showing no tendency to decline in the immediate future, are no true index to the ultimate prices to which silver will eventually settle down and that, therefore, the fixing of the exchange permanently and definitely on the basis of the present prices would be a mistake. In their opinion the question of the permanent exchange should be deferred to a more suitable time. In the meantime a temporary rate based on the present prices of silver and forecasts for the immediate future, should be determined and *Government should undertake not to alter this*

rate for a fixed period, which would satisfy trade requirements, except under extreme necessity. Towards the end of this fixed period the Secretary of State should revise the rate in the light of variations during the period in the prices of silver and the future forecasts, the revised rate being announced to the public at least one month before the expiration of the fixed period. This practice should be continued till, in the opinion of experts, silver has settled down to steady prices, when the whole question should again come up for discussion and final settlement. The advantage of adopting this middle course would be that while trade would be assured of the stability of the rate for a period necessary for its operations, Government would not be definitely binding themselves to a rate which they may find themselves unable to maintain for a long time. Moreover, though the temporary rates would be liable to revision after fixed intervals, the revised rates would be more or less correctly anticipated by trade as the variations in the prices of silver, according to declared policy, would alone form the basis of revision.

Paper Currency Reserve.

One redeeming feature of the trying situation Government had to face during the war has been the great popularity of currency notes. In the light of this experience they may safely go forward with a bolder policy in respect of their note-issue. The present proportion of the fiduciary issue (which is more than 64 per cent. of the net circulation) must of course be brought down, but it may safely be maintained at figures much higher than the pre-war ones. In this respect Government could not do better than accept in full the recommendations of the Chamberlain Commission to the effect that the practice of keeping the fiduciary portion at a fixed maximum figure should be abandoned, and the system made more elastic by fixing the fiduciary portion "at a maximum of the amount of notes held by Government in the Reserve Treasuries plus one-third of the net circulation." The recommendation as to giving loans to the Indian money-market on first-class paper from the fiduciary portion should also be given effect to.

The Import of Gold and Silver.

It has already been stated above that the embargo placed on the import of gold and silver on private account had the effect of accentuating to a certain extent the demand for rupees. This embargo should be removed at once, and private import of the precious metals allowed freely without licence.

Token Coins for small Change.

While emphatically opposing all proposals for the debasement of the rupee, the Committee of the Chamber are not averse to the experiment being tried in case of small change, *e.g.*, 4 annas and 8 annas pieces. These being not unlimited legal tender, the objections which apply in case of the rupee do not apply with any force to these. The success of the 2-anna nickel piece should afford an encouragement for the step, which may bring some slight relief.

Council Bills and Reverse Councils.

The Secretary of State should continue selling Council Bills freely to meet the requirements of trade, but these sales should not be carried to such an extent as to embarrass the Government of India. Sales of Reverse Councils should be pushed.

Inconvertibility.

Inconvertibility, however temporary, would be disastrous, and should be avoided at all costs. The Committee of the Chamber venture to think that if the foregoing suggestions are adopted Government will not have to face this issue.

General Currency Policy.

The currency policy of Government has hitherto been more a matter of "practice" than of "system," and in the words of Professor Keynes it has been a "policy of drift." Unnecessary secrecy, which has so often led to misunderstandings and misinterpretation, has also been one of its outstanding features. Government will do well to take the mercantile community, who are so closely interested in these matters, and the educated public generally, a little more into its confidence in the future.

(*m*) *Letter from the Honorary Secretaries, Indian Economic Society, Bombay, to the Secretary to the Government of India, Finance Department, Simla, dated 18th August* 1919.

We are directed by the Committee of this Society to address you on the subject of Currency and Exchange, for submission of our views to the Currency Committee appointed by

the Secretary of State for India. While our Committee regret that no invitation was extended to their Society, they have, in view of the public importance of the subject, considered it desirable to submit their views for consideration by the Committee now recording evidence in London.

2. Our Committee desire to point out at the outset that not only has the whole history of the currency of the country since the Indian Mints were closed to the free coinage of silver in 1893 been unfortunate, but the policy pursued has been of positive disadvantage and loss to the merchants and producers of the country. We do not propose to offer any detailed survey of the various incidents that marked the adoption of the policy, for they are only too well known. But, in particular, we would refer to the financial events of 1907–08, and recently of the years 1914 onwards, which events have, in the opinion of our Committee, sufficiently proved that the whole currency system of the country demands urgent and immediate revision. Our Committee are strongly of opinion that the fluctuations that have taken place in exchange of late, the consequences of which are disastrous to the Indian export trade and industries, demand measures which should ensure its fixity within the gold points. While it was difficult to prevent some fluctuations owing to the prevailing war conditions, yet their extent and intensity were such as could have been avoided by adequate measures. Now, however, that war conditions no more exist, we venture to suggest that definite measures be adopted to prevent their occurrence in the future.

3. Our Committee are of equally strong opinion that the Gold Exchange Standard, which has been adopted for the country in spite of the expert and definite recommendations of the Fowler Committee of 1898, has failed on more occasions than one, and has not stood the test imposed upon it by the conditions in the years referred to above. Our Committee, therefore, beg leave to suggest that the only way to provide the country with a suitable exchange and an automatic currency, is by the adoption of the real and the effective gold standard. The reasons for the adoption of such a standard are too obvious for us to dilate upon here. We may, however, suggest that no solution of the problems facing the country will be more than temporary except by the earliest adoption of a standard that will automatically prevent the occurrence of such exchange fluctuations as have told adversely in the past and in recent years.

4. Our Committee regret to observe that the particular and special subject of the gold standard has not been specifically mentioned in the terms of reference to the Committee appointed by the Secretary of State; and in case it is not the intention of that Committee to record evidence on the same, our Committee beg leave to offer their views on the questions immediately facing the country, and regarding measures to be taken with a view to relieving the present acute situation, however temporary in their effects.

5. The first and the most important suggestion that our Committee have to make is that relating to the restrictions that have been imposed during the war on the importation of gold and silver. Those restrictions were perhaps justifiable because of the conditions prevailing during the war, and it is certainly questionable whether they can be removed at once, even though the war is over. For, at the current rate of exchange, sovereigns could be imported at a little over Rs. 11 and sold in the country at least at Rs. 15, their declared legal tender value. On the other hand, the removal of the restrictions would no doubt ease the currency situation with which we are faced, and reduce the demand for rupees, and thus help to bring down the present price of silver and the rate of exchange.

An objection might be raised that any such withdrawal of the existing restrictions would, on the other hand, result in an excessive importation of gold, and in large profits to the importers of the metal. These evils would, however, be avoided if the legal tender value of the sovereign, half-sovereign and the gold mohur be raised, so as to correspond with their bullion value, which at the present rate would be about Rs. 19 and either

(*a*) an import duty be levied on gold bullion and coin to the extent of the difference between the cost price on importations and the prevailing price in India, allowing a certain reasonable margin of profit to importer; or,

(*b*) the import of gold and the sale thereof together with that of the gold already in the Paper Currency Reserve in India be undertaken by the Government.

The effect of this would be:

(1) that the hoarded gold coins of the country would tend to reappear in circulation, and the danger of the newly imported coins being hoarded or melted prevented;

(2) the hoarded rupees would likewise reappear in payment of the gold; and

(3) the increased stock of gold coins, in more effective circulation, would appreciably reduce the demand for the silver currency, and would thus help materially to bring down the present high price of silver and the existing rate of exchange.

The proceeds of the suggested import duty, or, in the second alternative, the profits of Government import and sale of gold bullion and coin, could be utilised partially as a set off against any loss incurred in purchasing silver at high rates and in issuing rupees below cost,

and largely as a reserve to be used for redeeming the gold coins at the legal tender value fixed from time to time, whenever the value has to be reduced to conform with the bullion price determined by the decreasing rate of exchange.

The advantage of these proposals would be that gold would be imported on a comparatively moderate scale, and undue profits will not go to the private importer.

The argument that any import of gold in India would at the present time be a strain on the gold resources of England, can be easily met by the answer that (*a*) the gold reserve of the Bank of England is to-day more than double of what it was in the pre-war times; (*b*) in any case the silver purchases of the Government of India have to be paid for just as the proposed gold purchases would have to be, the silver ultimately being brought from resources largely outside the Empire; and (*c*) there are other resources from which gold can be secured, viz., the United States of America, and some neutral countries that have accumulated large stocks of the metal during the war.

To meet this increased demand for gold, it might also be found desirable for the Government of India to offer to purchase the output of such mines as have already been closed down, or are likely to be, at a rate slightly higher than the Mint price of 3*l.* 17*s.* 10½*d.* per ounce of British standard gold, the margin of profit on the suggested Government transactions being sufficiently large to cover this.

These suggestions, if carried out, will have the further advantage of enabling Government to issue gold notes.

6. Our Committee are of opinion that the paper currency has not increased to the desired extent, largely on account of lack of facilities for the exchange of notes into rupees and *vice versâ*. They suggest that, if a Central or State Bank were established, with branches in at least all the district towns, and entrusted with the work of the district treasuries, the Bank will be able to make these notes much more popular than they are at present, for the simple reason that it will be able to provide better facilities for their encashment. This will have the further desirable and beneficial effect of encouraging banking habits among a population which, in the absence of such facilities, has had perhaps the only alternative of hoarding their savings. While on this subject our Committee would beg to point out that all efforts should be made for encouraging the use of cheque currency side by side, even at the cost of remitting the existing stamp duty on cheques. The point is that the people of the country should be encouraged by every possible means to use less metallic money when the purpose could be served either by paper currency or by cheque currency, the latter being in the opinion of our Committee far more economical than the note currency. The Presidency Banks could further this cause by allowing their clients to issue cheques in the vernaculars. And the lead thus given by them would doubtless be followed by the other banks of the country.

7. Our Committee would also emphasise the necessity of divesting the Secretary of State, and no less the Government of India, of the management of the currency of the country and the control of exchange. The State Bank that we have proposed would be eminently suited to manage, on the spot, the currency requirements of the country, while the country's obligations in London could be met through a branch of the State Bank there, as is done by other countries. The present control of the Secretary of State, assisted as he is by a Finance Committee on which there is a preponderating influence of the London Money Market, is detrimental to the best financial interests of India. Our Committee would point out in this connection that the location and the employment of Indian reserves and balances in England have had a very prejudicial effect on the money market of India, and have artificially prevented the natural flow of gold into this country. The investment of a large part of these reserves in British and Colonial securities has also, in the opinion of our Committee, had a detrimental effect on the general financial interests of India. The location of a large part of the Gold Standard Reserve in India would have a decided advantage, and would have largely helped in preventing the very situation that the country is now faced with. The possibilities of an adverse balance of trade have, in the opinion of our Committee, been unnaturally and unjustifiably overweighted before the possibilities of the rise in the price of silver that we have been faced with.

8. Our Committee beg to suggest that the purchase of silver for the currency requirements of India should be made from a market as wide as possible, and tenders should not be limited to a few firms in London. The silver market of London has been unfairly developed in past years at the cost of Indian interests. We do not suggest that the opening of the Indian market to the silver requirements of the country will in any way save the country in cheaper silver. But we do suggest that, if tenders were invited in India for the silver requirements of the country from time to time, quantities of silver that may have been hoarded may be given the incentive to appear again in useful circulation.

9. On the important question of the price of silver and its bearing on the exchange, our Committee are of the opinion that, though various causes contributed to the high increase in the price of the commodity of late, there are a number of equally important factors that are likely to bring it down to a less abnormal level. The confidence restored in the Government by the successful termination of the war, the diminution and the gradual cessation of the

strain imposed on the country to meet war requirements, together with the operation of similar forces in other countries of the world, where the demand for silver currency had increased owing to war conditions, will all have the natural effect of decreasing the demand for silver coinage in India and elsewhere in the future. And our Committee can conceive of the time when the price of silver will be such as to warrant fixity of exchange almost at the pre-war level.

10. To some extent the present acute situation could be met by the coinage of subsidiary coins of fractional currency in a metal cheaper than silver. Our Committee feel that the mintage on a large scale of subsidiary coins of cheaper metal will to some extent help in reducing the demand for the silver rupee, and incidentally also may further the popularity of notes of small denomination, if the post-offices in the country afforded facilities for cashing notes in these cheaper subsidiary coins.

11. Whatever steps are taken to meet the pressing immediate situation, our Committee are distinctly of opinion that the debasement of the rupee currency or inconvertibility of notes should not be resorted to, as any such action will only help to create fresh complications, which may prove more difficult of solution than the present problems.

APPENDIX XIV.

Memorandum submitted by the Life Offices' Association, London, dated 14th July 1919.

Views of British Life Assurance Companies doing business in India respecting the proposed alteration in the sterling value of Indian Currency.

The suggested stabilisation of the rupee at 1*s.* 8*d.* would, if adopted, seriously affect British Life Assurance Companies, who have issued policies in rupees against premiums in that currency. In the belief that the rupee would be maintained at 1*s.* 4*d.*, they have for many years brought to this country their surplus balances for investment. To the extent, therefore, to which they hold sterling assets against rupee liabilities the arbitrary raising of the sterling value of Indian currency would mean, if the rate were fixed at the new figure, a loss of 25 per cent. either on remittances to India or in the valuation of their contracts, the liability under which would be increased by the same percentage.

The Companies doing business in India, believing as they do that the two principal factors which have contributed to the rise in exchange, viz.,

(1) the balance of trade in favour of India, and
(2) the increase in the price of silver,

are transitory and not permanent, would greatly prefer to see the rupee take care of itself and find its own level, which they think would be nearer the figure which ruled prior to the war than that now prevailing.

The Companies are aware that by advocating this policy they may be faced for a time with a rise in exchange beyond an established figure of 1*s.* 8*d.*, but they are convinced that their interests would be better served in meeting this possible temporary loss, if it arises, than by the acceptance of a permanent addition to their existing liabilities.

APPENDIX XV.

(*a*) Memorandum C., by Mr. F. H. Lucas, C.B., C.V.O., Financial Secretary, India Office.

1. I am in complete agreement, in general and in detail, with Sir L. Abrahams' statement of the case in Memorandum A,[1] and, subject to due emphasis being laid on the saving clause in the penultimate sentence of paragraph 20 (a), with his criticisms and conclusions in Memorandum B.[2] I can therefore only usefully add to what he has written, if I am allowed to ask the Committee to consider the extent and manner in which the problem as stated, and the solution as suggested by Sir L. Abrahams, would be varied by the adoption of definitions of (a) the rights, and (b) the duties of India, as an economic unit among the Nations of the League, differing from those stated or implied in Memoranda A. and B.

2. (a) *India's Rights.*

It will have been noted that in para. 1, D and E of Memorandum B, Sir L. Abrahams invites the Committee to consider, amongst other possibilities, the possibility that India's trade balance will not again be remitted to her to any considerable extent by free shipments of gold. Some critics, who place the specific interests and rights of India in the first place, may be expected to object at once that the Committee ought not to base

[1] Evidence, p. 1. [2] Evidence, p. 60.

their recommendations upon a surrender by India of what has hitherto been in time of peace the unquestioned right of a creditor country to take at discretion as much gold as its population collectively desires in payment for its trade balance.

(b) *India's Duties.*

In para. 18 of Memorandum B, Sir L. Abrahams names the deeper economic interests of India as the final touchstone by which the policy to be recommended by this Committee should be determined. This proposition may be questioned by critics from the standpoint opposed to that named in (a) above, such, namely, as are preoccupied with the interests of some larger unit, embracing India, the British Empire for example, or the whole society of civilised nations, groaning and travailing in one universal shortage of material and dislocation of industry and the exchanges.

3. It is natural to conclude that between these two extreme lines of criticism there must be a mean representing what is just, reasonable and practicable in the state of the world as we have it, and Sir L. Abrahams can well defend the definitions quoted as best calculated to achieve this aim. I confine myself in what follows to developing and examining the two opposed lines of thought which diverge on either side of the position he has assumed, with a view to supplementing his conclusions by more detailed suggestions in regard to the policy which should be adopted in respect to the import of gold. The statistics of past gold imports in Appendix II. to Memorandum A. are significant of the extent to which the interruption of the free flow of gold has intensified the exchange difficulties experienced during the war. The problems before the Committee seem to be deeply conditioned by the resumption or otherwise of gold imports, whether immediately or after a longer or shorter interval. A brief statement of first principles may therefore not be out of place here.

4. *Ought the Committee to base their recommendations in regard to permanent policy on an assertion of India's equal right with other countries to import gold up to the limit of her effective demand?*

(a) *The Political Argument.*

This needs no elaboration. In view of the position conceded to India as an original member of the League of Nations, and of the steps now being taken by Imperial legislation to accelerate the progress of India towards responsible self-government in the future, many will be found to urge that those now responsible for her international relations cannot acquiesce in any permanent restriction, or indeed any arrangement save of the most temporary character, discriminating against the right of India to make free imports of gold.

(b) *The Economic Argument.*

Critics of the same views base their economic case on what they term the unprecedented paradox involved in compelling a creditor country to adopt unwillingly an inconvertible paper currency by withholding the gold due in payment for excess exports and by substituting, through Government action, forced payment in the form of external credits against which the Government currency notes are issued. Their claim is that neither goods nor securities ought to be, or indeed in the long run can be, forced upon India in excess of what she will voluntarily take, and that, granted the inadequacy of silver, gold imports remain the sole instrument for balancing her trade. They would, therefore, place squarely on the world outside India the onus of choosing between sending gold and doing without some of the products of India which now are and must always remain in keen demand by industrial countries. It is claimed that gold imports alone can secure to India in combination the three advantages of unrestricted exports, a currency freely convertible into metal on demand, and a stable exchange on the basis of a gold standard. Their demand is that India should not be asked to face the alternative evils of the restriction of her export trade, or inconvertibility, without a resolute assertion by those responsible for her economic welfare of her right to share in the world's gold on equal terms and to the limit of her effective demand. It is implied that India's economic strength as a source of raw material would render such a claim effective if made.

5. *Are India's particular interests to be the final test in framing the Committee's recommendations?*

It will immediately become apparent that the above question does not suggest a doubt whether this Committee ought to prefer any conflicting interest of whatever magnitude over the interest of India; that would be an impossible suggestion; but rather whether in the present state of the world India's best ultimate interest may not prove to be only attainable by some apparent sacrifice of her immediate particular interest, as described in the preceding paragraph, to the interest of some larger unit, whose fortunes, good or bad, must inevitably involve for better or worse the fortunes of India. What follows is submitted with reserve. We are here upon what was until yesterday virgin soil. The position described in the preceding paragraph is "national" and "particularist," and, as such, assertive, trenchant, full-blooded, material, and palpable. To the particularist mind the opposed view now to be stated must always appear pale, tenuous and halting by comparison. Indeed, until the secular particularism of sovereign states reached an evil climax in German aggression and the ensuing cataclysm, such views were, and could not be otherwise than, systematically

disregarded by persons holding the position of trustees for national interests. But there are many now, including some in high authority, who hold that civilisation will either surmount the present and impending perils by a far higher strain of co-operation and mutual dependence among its national units than heretofore, or else go down, the weaker involving the stronger one by one in a chain of common ruin. They are able to point to a world in which disordered currencies, confused exchanges and industries crippled by shortage of material and paralysed by social discontent may rapidly produce stresses at least comparable to the major stress of the war itself. What chance, they may ask, exists unless consent—not here or there, but everywhere—can be won or extorted to every expedient for utilising available resources of all kinds with the severest economy and to the best possible advantage? Among these are the world's gold resources. The use of gold as currency can be and is being dispensed with by vast populations. In their view to place gold freely in the hands of a population still in large part given to hoarding it, would be unjustifiable waste. If the onus of choice mentioned in the preceding paragraph were placed upon them, many among them would prefer that gold should be conserved for social purposes even at the cost of dispensing with exportable produce from the East. But they would go further, and reject the dilemma altogether. They would say that in order to re-establish the productive power of Europe and so enable her to pay her debts, the utmost degree of mobility of produce and merchandise must be secured. If the required exchange facilities cannot be supplied by private agencies, Government action, such, *e.g.*, as the unrestricted sale of Council drafts, must, sooner or later, and certainly in the last resort, be invoked. If credits are found to purchase American foodstuffs for starving Europe, the grain cannot remain unshipped for want of Indian burlaps to pack it. If the British Empire is to meet its interest obligations on money borrowed abroad by the shipment of goods, India's exportable surplus cannot be left to rot for want of exchange. Let these examples be multiplied and combined with the fruits of particularism in other quarters, they would say, until the choice is seen to lie between inconvertibility in India and such an aggravation of the world's troubles as may reverberate on India herself and wither her new and fast growing renaissance at the root. It is possible, however, to accept in its extreme form the position just stated and yet to hold that the general interest will be best served by giving India immediate and free access to gold. It may be argued that it is a mistaken view to regard gold hoarding as an unmixed and unmitigated mischief to the world. A gold importing population such as India has been in the past, which chooses to take payment in that form for a part of the useful consumable produce which it puts at the world's service, by that very choice abstains from present consumption of goods, and thereby helps to bring down the gold prices of commodities. The gold hoarder is thus seen to stand midway between the man who saves and invests[1] and the man who expends his whole surplus above efficient subsistence on present consumption. He is a less useful citizen of the world than the first, but much more useful than the last. In this view it is held by some that in order to reduce the present excessively high world level of gold prices, and as a subsidiary means to the increased production of goods, all measures should forthwith be taken to encourage and make operative the effective demand for gold. Such measures would include the re-opening of India to the free import of gold.

6. It will be for the Committee to consider how far the extreme view expressed above exaggerates the evils to the world which would result if India's exports were restricted, by withholding gold, from rising to the fullest extent of her economic power as a source of food and raw material. The point obviously turns largely on the question of amount. The statistics of past gold imports in Appendix II. of Memorandum A. afford some guidance, but it will be borne in mind that there are arrears to be made good in respect of the five war years during which the normal annual importation was in abeyance. (1) The extreme view would be that India's full demand for gold, including such arrears, could be met without any disproportionate call on the world's resources. (2) At the other extreme would be the view that Government should sell Council drafts freely up to the limit of demand at a rate so adjusted as to make the existing offer of Indian currency for gold imported under Ordinance ineffective, so excluding gold altogether. This view may be dismissed as involving the unreasonable expectation that the rooted habits and prejudices of a vast eastern population can be eradicated in a moment or else ignored. (3) Between these extremes a more moderate view would be that the free import of gold as a means of balancing trade should be laid down as a fundamental of the permanent and normal policy to be followed as soon as circumstances permit, but that the Government must continue, for the present, to keep control over, and when necessary impose a limit on, the amount of gold going to India under the Ordinance now in force. The Governments[2] which are at present withholding permission to export their gold might be brought by such an undertaking on the Government of India's part to allow the outflow of a moderate amount of gold as a means of obtaining exchange for financing desired imports from India, whereas the assumption underlying the extreme view in para. 4 and at (1) immediately above, viz., that India's coercive economic control could be successfully exercised, might in the event be resisted and defeated.

[1] The hoarder of Currency Notes is an involuntary specimen of this class, the interest on his investment accruing to the public.

[2] The removal of the United States embargo on gold exports was announced on the 9th June 1919.

7. The preceding paragraphs appear to point to one definite conclusion, which is common to each of the three varying views already set out:—

That in the interests of the world at large no less than the particular interests of India means must be found for financing Indian exports in full. The three views are, however, in conflict as to the means of securing this aim.

(1) The first view asserts India's right of importing gold up to the full effective demand.

(2) The second requires the provision by Government of Council drafts up to the limit of requirements, notwithstanding any risks which this course may entail to the maintenance of convertibility.

(3) The third view suggests the supplementing, by agreement with other Governments[1] which would have to be sought and obtained, of Council remittance by the shipment of gold subject to limit of amount and under the control of the present Ordinance at a rate adjusted closely to the rate for Council drafts. The object of the present control is to counteract the special and extraordinary inducements to import gold arising out of (*a*) the existing excess (amounting to Rs. 3 per 1*l.*) of the internal legal value of the sovereign (Rs. 15) over the rupee exchange value of 1*l.* (Rs. 12), and (*b*) the existing bazaar premium on gold over the legal ratio of Rs. 15 = 1 sovereign. The criterion to be applied for limiting the amount and the use to be made by the Government of India of the gold so acquired are discussed in their place at 8, C. below.

8. This paragraph summarises in conclusion the practical measures which would appear to be required in conformity with each of the views mentioned. The first and second views, A and B below, are stated in detail for the sake of theoretical completeness, since the balance of advantage seems to incline decisively in favour of the third view at C.

A. *If the full right to gold imports is to be immediately asserted.*

(1) Par of exchange to be fixed and the legal ratio of the sovereign to the rupee for internal transactions to be made to correspond; *e.g.*, if the par of exchange were fixed at the present level of 1*s.* 8*d.* the rupee, the internal rate for sovereigns would have to be altered by legislation from Rs. 15 = 1*l.* to Rs. 12 = 1*l.*

(2) Freedom of gold import to be restored. It is possible (but there is room for two opinions as to whether this possibility would be realised) that an effective gold point would thus be restored and possible rises of exchange above the parity fixed under (1) would therefore be limited to the costs of laying down gold in India. The cost of freight, insurance and interest amount at present to nearly $\frac{1}{2}d.$ in the rupee. To this must be added the cost of paying any premium required to secure gold for shipment. Such imports would presumably be absorbed by sale by the importers to the public as bullion until the supply for the arts shall have brought down the bazaar price to a parity with the Indian mint price as adjusted under (1).

(3) The Branch of the Royal Mint at Bombay to remain in operation and receive bullion tendered for coinage at the mint par (Rs. 12 = 1*l.* if the par of exchange is fixed at 1*s.* 8*d.* the rupee). The initial imports of gold taken as bullion by the public would serve to balance exports and would bring out Indian currency, so mitigating the risks of inconvertibility. When the bazaar became saturated further imports of gold would be sent as a means of remittance and would be tendered for coinage into legal tender currency. This would restore an automatic means of increasing the metallic legal tender currency of India and would enable convertibility to be maintained without imposing on Government the necessity of buying silver for coinage at a sterling price exceeding the exchange parity of the rupee.

(4) Sale of Council drafts to be limited to the Secretary of State's requirements, and in no case to be made against fresh note issues secured by sterling investments. The maximum rate for Council drafts not to exceed the parity fixed under (1).

N.B.—The rate of intake of gold could, if necessary, be regulated under this clause. If it were desired to exert a gold drawing power in excess of the current demand for exchange, the sale of Councils could be reduced below the Secretary of State's requirements for the year, the balance of sterling needed being found by cancellation of Indian currency notes in the Government of India's Treasuries against realisation of sterling securities of the Paper Currency Reserve held in London. As an extreme example, the sale of Council drafts could be discontinued altogether for a period until the 50,000,000*l.* held in the Paper Currency Reserve in London had been liquidated in full. In effect this would reinforce the gold suction set up by current demand for exchange by applying the vacuum chamber resulting from the transactions during the war period.

B. *If the attempt is to be made to finance all uncovered exports without gold.*

(1) The chief requirement would appear to be that unlimited Council drafts should be sold by the Secretary of State at any risk to the maintenance of convertibility. The course to be followed in detail would be that indicated in Memorandum B.

[1] The removal of the United States' embargo on gold exports was announced on the 9th June 1919.

except that in no circumstances would the sale of Council drafts be restricted to meet a passing emergency as suggested in paragraph 20 (*a*) of Memorandum B. It might, however, be thought advisable as an alternative to revert to the allotment of Council drafts among a limited list of recipients, and to reimpose the previous conditions in regard to preferential finance for stated exports, so as to discriminate in favour of exports declared to be of world importance. This expedient would, however, entail extreme inconvenience, and be correspondingly difficult to employ.

C. *If remittance by Council drafts is to be supplemented by controlled and limited gold imports, pending the possibility of return to free gold imports.*

The measures to be taken on this hypothesis would appear to follow almost precisely on the lines suggested in Memorandum B, supplemented by the following special measures in regard to gold :—

(1) As under A, par of exchange to be initially fixed, and legal ratio of the sovereign to the rupee for internal transactions to be made to correspond (*e.g.*, Rs. 12 = 1*l.* if the rate is fixed at 1*s.* 8*d.* the rupee). If para. 19 of Memorandum B were followed, the par of exchange would be subject to alteration upwards if sufficient silver to maintain convertibility could not be purchased below the price corresponding to the parity first chosen. If the Government of India's policy were followed, the parity first chosen would be fixed, and not subject to alteration.

(2) Gold imported under Ordinance to be acquired by Government at the parity fixed under (1), *i.e.*, in the illustration chosen at Rs. 12 = the gold content of the sovereign. The object of the Ordinance mentioned in 7 (3) would continue to be secured.

(3) Gold acquired by the Government of India under the Ordinance to be sold by them to the public in the form of bars for what it would fetch, until the price fell to the parity established under (1). Profit on such sales to be earmarked towards a fund to make good the exchange loss on the sterling investments of the Paper Currency Reserve. If it were desired to limit the fresh acquisitions of gold to the lowest point, the gold now held in the Paper Currency Reserve in India, or so much of it as might be required to bring down the price in India to the parity established, might also be sold.

(4) Until the Indian bazaar price for gold has been reduced to the parity by sales as under (3) the issue of gold for the encashment of currency notes to be discontinued. When this point has been reached a substantial portion of further acquisitions of gold to be held in reserve and sold as required to maintain the parity between the bazaar price and the mint price.

(5) Council drafts to be sold at the rate fixed by the parity under (1) to the limit of convenience to Government. If for any cause imports of gold should cease it would be necessary to consider whether unlimited Council drafts could be offered. It would seem appropriate to reserve for this eventuality the sale of the gold already in the Paper Currency Reserve, since in this way the process of reducing the premium on gold in India could proceed, during the temporary cessation of imports under Ordinance.

9. C. in the foregoing paragraph proposes a bridging scheme for temporary purposes. As a basis of permanent policy in regard to gold the following appears to be the ruling principle :—

Full freedom of import of gold on private account should be restored. This is necessary firstly in order to secure to the population of India what ought, when present abnormal complications disappear, to be their admitted right to take their trade balance in gold up to the limit of their own discretion. Secondly, in order that the balance of Indian trade, and the stability of Indian exchange on a sterling exchange standard, may be adequately secured against a recurrence of the recent disturbances. Thirdly, in order that gold as well as silver coin may be available for maintaining the convertibility of the note issue.

Note to Paragraph 8 C.

If, as contemplated in paragraph 20 of Memorandum B., and in paragraph 8 C (5) of this Memorandum, it were decided to limit the amount of Council drafts, and if it were also decided to sell drafts thus limited at competitive rates and to remove all restrictions on the rates of business, an upward limit of exchange would, under present conditions, be fixed by the cost of obtaining gold from America for shipment to India for tender to Government at the present notified rate of Rs. 12. 4½ per sovereign, or Re. 1 for 9·20115 grains of fine gold. This limit would of course vary with dollar sterling exchange, *e.g.* :—

At 462 cents = £1.

	d.
The cost of 9·20115 grains of fine gold obtained in United States by remitting from London to New York is - - -	20·58
The cost of transporting the same amount of gold to India (at, say, 2¼ per cent. charges inclusive of interest) is ½d. - - -	·5
The total cost of Re. 1 so obtained is therefore - -	21·08

Say, at outside, 1s. $9\frac{3}{32}d$.

If, as suggested in paragraph 8 C (2) above, rupees were given for imported gold on the basis of Rs. 12 = £1, the cost of remitting to India would be ½d. per rupee higher. viz., 1s. $9\frac{19}{32}d$. in the illustration given.

SUPPLEMENT TO MEMORANDUM C. BY MR. F. H. LUCAS, C.B., C.V.O., FINANCIAL SECRETARY, INDIA OFFICE.

1. Since the preparation of Memorandum C. for the Committee, two new facts have supervened, viz., (1) the re-establishment of a free market for gold (in America), and (2) a pronounced fall in the exchange value of sterling. These two facts, taken together, appear to me to have profound and far-reaching effects on the solution of the problem before the Committee, and I am prompted by them to submit a more decisive statement of suggested policy than that sketched in para. 8 (C) of Memorandum C.

2. It has been suggested by other official witnesses—

(*a*) That an exchange value of the rupee should be forthwith fixed, declared and maintained, in sterling; and (alternatively)—

(*b*) That the sterling rate for Council drafts should be varied from time to time as occasion may require by Government in accordance with upward movements in the price of silver.

I venture now to advance a third suggestion, viz., that the exchange value of the rupee should forthwith be fixed and declared in terms of gold, that the rate declared should be maintained in the manner shown below, and that as a necessary consequence the sterling rate for Council drafts sold in London should each week determine itself competitively by the laws of supply and demand.

3. The objection that is taken to plan (*a*) above, viz., that it sacrifices to the convenience of obtaining a stable ratio between the rupee and the pound sterling (great as this is) what ought to be regarded as the much more cardinal interest of securing for India a stable standard of value, and the avoidance resulting therefrom of the evils of inflated prices, is gravely intensified by the recent heavy fall in sterling and by the reflections as to the possible future which this cannot fail to suggest. There is a surface resemblance between plan (*a*) and the entirely satisfactory arrangements in force before the war when gold and sterling were interchangeable terms; but in present circumstances—and the fact cannot be too plainly insisted upon—to adopt it would be to incur the risk that the evils of high prices may conceivably be inflicted upon India, a country the least suitably constituted to endure them, in an aggravated form. For if prices rise in this country, or even if they fail to fall, such a mere mechanical linking of the rupee to the pound sterling as is contemplated could not fail to communicate to the Dependency the same shrinkage in the standard of value. If an attempt is made to cover this risk in advance by initially fixing a relatively high sterling rate, then the opposite risk is incurred, viz., that with the recovery of sterling to gold par the rate, and therefore the Indian standard of value, will be found to have been fixed too high. In any case, India will have been saddled in the interim with an unstable and fluctuating standard of value.

The surface resemblance alluded to above will not disguise the fact that what is proposed in plan (*a*) constitues an entirely new departure in the history of currencies. I am not aware of any precedent for fixing the exchange value of a currency in terms of another currency which is not itself freely exchangeable for gold at par. The departure is so great that it could hardly have been put forward except on the assumption that a full gold standard will be recovered in this country at a not too distant date. It may be hoped that this will happen. If it does, and if the rupee is now fixed not in sterling but in gold, the desired identity between the rupee-gold and the rupee-sterling rates will then supervene, just as it would supervene if the rupee were now fixed in sterling. But if for any reason the recovery of sterling is delayed or even set back, the evil consequences on prices in India indicated above will have been incurred by fixing the rupee in sterling, while they might be avoided by fixing it in gold. What is now suggested is, not a new departure, but a return to the tried system in force up to 1914, making all necessary adjustments to meet the altered circumstances arising out of the divorce of sterling from gold.

4. I turn to the effect upon the alternative suggested solution (2 (*b*) above) of the reopening of a free market for gold in America. Plainly, this affords the opportunity of maintaining convertibility without resort to the purchase of silver at a price above the gold parity chosen. Silver will continue to be purchased in whatever quantities are offering in

the market from time to time at any price below and up to that parity[1], and reliance will be placed on gold for meeting the remaining demand, if any, for metal in encashment for notes. It may be noted in passing that gold cannot be issued in the form of coin until the bazaar price of gold has been reduced by sales of bullion to the gold parity chosen. Thereafter there is no theoretic reason why free coinage of gold should not be reopened. It is urgent on other grounds, viz, the reduction of the currency note liability, that the process of reducing the premium on gold in India by sales should begin. It is also urgent that legislation should be passed putting a period (which should be as short as may be judged fair and reasonable) to the Government's liability to give Rs. 15 for one sovereign. Moreover at the expiry of the period of notice the Government would be free to declare sovereigns legal tender at the new gold parity, to remove the existing licensing restrictions and permit the free import of gold.

5. In order to illustrate the foregoing by giving actuality to the scheme as it would be in operation, I assume that the parity selected is Rs. 12 equals 113·0016 grains of fine gold, viz., the gold content of the sovereign. The method would be as follows:—

(1) Council drafts to be sold weekly in London for sterling by competitive tender up to the limit of the Secretary of State's requirements.

(2)[2] Council drafts of unlimited amount to be "on tap" at the Federal Reserve Bank of New York at the rate of 40½ cents to the rupee (the equivalent of the gold parity mentioned above). It might, perhaps, be preferable to re-establish a gold point in the full sense of the term, *i.e.*, place the cost of shipment of gold on the remitter. In that case the rate would be 41½ cents to the rupee.

The competitive rate under (1) would find its upper limit each week in the cost to the sterling remitter of obtaining rupees by the purchase of exchange on India under (2). Under present conditions the sterling quotation would be rather above 1*s.* 10*d.* With each recovery of sterling the sterling rate obtained for Council Drafts would of course fall and would settle at 1*s.* 8*d.* the rupee concurrently with the final restoration of sterling to gold par whenever that may be. The manner in which the lower limit would be fixed as shown at (4) below.

(3) When free gold is restored to London the sales in New York would cease, since pre-war conditions would automatically re-establish themselves and unlimited Council sales for sterling could be re-opened.

(4) Owing to the increased costs of transport the margins representing gold point are at present rather wide and may be taken at ½*d.* in the rupee on either side. If the rate in London fell to a sterling figure representing ½*d.* per rupee less than the gold par, taking account of the dollar sterling rate of the day, the Secretary of State would refuse to sell, and if a demand for Reverse Drafts arose the Government of India would sell them for sterling at or near that rate. They might also make gold available for export. Such gold would of course not come to London until the gold basis of sterling is fully restored. Remitters to London would export it elsewhere and purchase sterling with the proceeds.

(5) Silver would be purchased whenever the price in America did not exceed $39\frac{1}{2}$ cents[3] $\times \frac{480}{165}$ per fine ounce, viz., 115 cents per fine ounce.

July 1919.

(b) *Heads of Argument for immediate fixation of the Exchange value of the Rupee in terms of Gold submitted by Mr. F. H. Lucas, C.B., C.V.O., Financial Secretary, India Office.*

1. I postulate that *immediate*, or very early, stabilisation in some form is most desirable, because the alternative is to continue, as at present, a rupee-sterling rate liable to be altered at intervals of a few months at the discretion of Government and by administrative action. The public uncertainty, which would thus be continued, is, I submit, uncertainty in its worse form, since it arises from spasmodic Government action, which must from the nature of the case be taken without warning. Up to the present this evil has been quite unavoidable. But it is a great evil, far greater than the amount and form of uncertainty which could possibly arise from such open market factors as the fluctuating sterling value of gold, which every trader could appraise for himself on business principles.

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[1] 115 cents per fine ounce if the gold parity chosen were Rs. 12 equals gold content of sovereign.

[2] A free market for the sale of the South African gold was established in London shortly after the above proposal was put forward. This enables the arrangements proposed to be based on the London gold market, instead of New York.

[3] *i.e.*, gold parity of 40½ cents less allowance for charges of shipping and coining silver at 2½ per cent.

2. Thus the problem I set myself is—

Is there any means of obtaining an *immediate* settlement which will—

(*a*) Provide automatically for a return to a stable sterling rate, when sterling recovers to par, and so avoid the necessity for any further tinkering by administrative order, which is in itself a great evil, and cause of public uncertainty.

(*b*) Provide as fair a chance as any other alternative, short of full silver standard, of maintaining specie payment of notes, if possible in both metals, or, failing adequate supplies of silver at the parity chosen, in gold.

(*c*) Equate the internal with the external ratio between the rupee and gold and both with a mint par at which the Bombay Mint could be opened to the free coinage of gold.

(*d*) Impose no restriction on the supply of unlimited exchange, other than the natural tendency of a high rate of exchange to limit the demand for exchange.

(*e*) Provide a corrective for high prices in India which would protect the masses of the poor in India from a part of the evils afflicting the rest of the world as a consequence of the war.

I am prepared to show that the scheme recommended by me satisfies all these conditions.

3. I am opposed to any proposal for an immediate stabilisation in *sterling* because, as I am prepared to show, this would conflict with all these desiderata except the fourth. It would—

(*a*) Involve a great element of risk that the rate chosen would subsequently have to be altered again by administrative action either upwards if sterling again falls seriously, or, later, downwards when sterling returns to par. Such stability would be at best precarious stability only, and would be seen to be so by the public. It would be vitiated from the start by the element of gamble on the future of sterling which none can foresee. It is, moreover, contrary to all sound monetary principles to base one currency on another currency, which is not a stable full value currency, but a fluctuating credit currency.

(*b*) It would prejudice the chance of maintaining convertibility, because so long as a fixed sterling rate is maintained, the limit of price which can be paid by the Government for silver would be at the mercy of sterling fluctuations and would fall with each further fall in sterling.

(*c*) It would prevent the remonetisation of the sovereign and its free coinage in India, at a new internal ratio corresponding to the external exchange ratio, since while the sterling ratio was fixed the gold ratio would be variable. Consequently, sovereigns could be issued in encashment of notes, if at all, only at the present legal ratio, which would involve their becoming token coins, or at some other arbitrarily fixed token value, which would necessitate first redeeming all the sovereigns now out at Rs. 15. Further, a token sovereign of any value would necessitate the continuance of the present restrictions on the import of gold, involving a heavy veiled *ad valorem* import duty on gold. It would follow that if unhappily the Government could not obtain sufficient supplies of silver, at the parity of the level of exchange fixed, to maintain full convertibility in silver, they would be deprived of their last resort, viz., the attempt to maintain specie payment of notes in sovereigns and half sovereigns, since while it would be possible to do this with the sovereign as a standard coin, of identical value as bullion, both in India and in the outside world, it would, in my opinion, be impossible to do so with overvalued token sovereigns.

(*d*) It would mechanically link the standard of value in India, and the general level of prices in India to the fluctuating fortunes of sterling. Unless so high a sterling rate were chosen as to involve the certainty that it must be brought down by administrative order when sterling returns to par, it would unnecessarily postpone the corrective of high prices in India postulated as a desideratum in paragraph 2 (*e*) above.

4. *Conclusions and Summary of substantive recommendations.*

A.—Method of Stabilisation. Rupee to be fixed in Gold.

I. A full opportunity now offers of restoring to India an automatic self-regulating currency, and of basing the exchange value of the rupee on gold (in anticipation of identity between gold and sterling).

II. This step at the present juncture finds its natural economic justification in the fact that the results of the war on exchanges have classed India among those countries to which under free conditions a portion of the world's gold would naturally flow.

III. The continued mechanical linking of the rupee with depreciated sterling, even at the new level now reached, which goes far to correct the resultant devaluation of the standard in India, exposes India to the risk of further sterling fluctuations and a further rise of internal prices.

IV. The fear is thought to exist that, under free conditions, India's absorption of gold would diminish the chances open to other countries of obtaining gold to restore the value of their insufficiently backed paper issues. The amount of gold going to India under free

conditions will depend on the extent to which silver purchases by the Indian Government displace private imports of gold as a means of balancing Indian trade; a higher price limit will secure a larger supply of silver, thus diminishing the gold taken by India. It follows that the fear of undue gold absorption would be, *pro tanto*, met by the proposal to fix a high rate of exchange, which is recommended at B. below as a protection of the masses in India from the effects of high world prices arising out of the war. The volume of the currency would still be automatic, but the limits of the Government's control over the proportions of its constituent elements as between silver and gold would be extended, *pro tanto*, by fixing a higher rather than a lower limit to the Government's buying price of silver.

V. If, in spite of IV. it is insisted that India should for a period be rationed in gold in the interest of the restoration of the productive power of Europe, such rationing should not take the form of a special and unique disability on India. An import duty on gold, veiled or otherwise, or any other device which would enhance the price of gold to the Indian purchaser above the level of the world's price would constitute such a special disability. It would not, *per se*, at all increase the gold resources of the countries with depreciated exchanges, since these would still be unable to pay the world price for gold. Instead, India should in the case supposed be asked to bear her due share, whether by foregoing gold or providing credits, in a general scheme of assistance in which other creditor countries would bear their part. In the special circumstances of India she might receive payment for credits granted by her partly in credits and partly in silver from foreign reserves, at or near their parity valuation.

B.—Rate of Exchange to be fixed.

A restoration of the standard of value and a fall in the level of prices outside India to their pre-war level cannot be looked for in any near future. The future of Europe has been mortgaged beyond any possibility of quick recovery. The special protection from the worst consequences of the war on prices that India now enjoys in the form of a high exchange, should be continued.[1] The rate of Rs. 11 to the sovereign, corresponding to a level slightly above the present sterling level of 2*s*. to the rupee should be chosen.

C.—Summary of Substantive Recommendations.

1. The exchange value of the rupee to be fixed at Rs. 11 to the gold sovereign.

2. The same rate to be the internal ratio in India and the mint par for free coinage of gold at Bombay.

3. As a preliminary step to altering the legal internal ratio, sovereigns in India tendered up to a fixed date to be redeemed at Rs. 15. The bazaar premium on gold to be concurrently brought down to the new legal parity by continued sales of bullion to the public by competitive tender.

4. The Indian Government to continue and expand all valuable means of economising metal (including gold) in circulation—

(*a*) by popularising notes, restoring as soon as this becomes possible the fullest facilities for ready encashment;

(*b*) by holding gold as far as possible in central reserves and meeting demands for coin as far as possible in silver;

(*c*) by stimulating banking and investing habits among the people of India.

October 1919.

APPENDIX XVI.

Memorandum D. by Sir L. Abrahams on Questions relating to the Use of Gold in India while Currency Difficulties continue.

1. Many questions, major and minor, can be raised regarding the action that should be taken in reference to gold in India while the present currency difficulties continue; *e.g.*, should an attempt be made to enable the sovereign to be used again, as was formerly the case, but is so no longer, as a coin of circulation? Or should the opposite policy be continued of using gold only as a merchandise and as a metal forming part of the legal *quantum* of the Paper Currency Reserve, but not available for any other currency purpose?

[1] A fall in the level of prices in the West when it ultimately occurs might eventually compel a return to a lower exchange because the high rate conjoined with falling prices outside India would so stimulate imports as to cause India's excess exports to shrink below the amount required to meet her external obligations on debt and administration account. This could, however, be averted up to the limit of the Government's sterling reserves (at present over 85,000,000*l*.).

Should the statutory ratio between the sovereign and the rupee continue for the present to be 1 to 15, or should some other ratio be now introduced? If another ratio is introduced, should it be a fixed one or one varying with the price of Council drafts or with some other variable? If a new fixed ratio is to be introduced, what should it be and what should be the time and manner of its introduction? Should importers of gold continue to be required to tender it to the Government at a stated price? If so, at what price? Or should they be allowed to sell it to the public direct? Should the Government of India continue, as now, to sell gold to the public? If so, should they sell at a price yielding a profit on the acquisition rate? If they are to sell at a price yielding a profit, what should the price be? These questions are stated in an order or disorder which illustrates their bewildering heterogeneity. This seemed necessary if the statement was to reflect faithfully the discord which appears to reign in the minds of enquirers as to what is the central question regarding the treatment of gold during the remainder of the present crisis and how it should be approached. During the last few months I have heard denunciations of the iniquity of restricting the so-called social use of gold in India, of raising its price in India above the world price, of imposing a *quasi*-import duty on the commodity most eagerly sought by the poverty-stricken millions of India, of interfering with the trade of honest banks and other dealers in the precious metals, and of equating different numbers of rupees to the sovereign (for internal circulation) and to the pound sterling (for foreign transactions) respectively. I have never heard an attempt to set forth a policy in regard to gold reached by the method which is obviously the correct one, viz., ascertaining whether there is any object of paramount importance to be served, pending the restoration of easy conditions, by any action that may be taken in regard to gold and, if so, adopting the policy which will best serve it. It is high time for such an attempt. My object in the present Memorandum is to make it. If I fail, I shall have failed as a pioneer in a worthy enterprise.

2. It is perhaps sometimes momentarily forgotten that Indian currency policy has only three objects, which may be stated as follows in the order not of their absolute importance, but of their importance for the purpose of the present sectional discussion:—

A. The maintenance of the convertibility of the currency note.
B. Stability of exchange.
C. The mitigation of forces tending to cause excessive variations in prices.

Clearly the principle which should guide the search for a policy in regard to gold during the present distress is that—what is needed is such action as will help towards the attainment of one or more of these objects without being prejudicial to the others.

A.—*Effect on Convertibility of Policy in regard to Gold.*

3. It can easily be shown that in the present conditions of uncertainty and difficulty a wise policy in regard to gold would be of the greatest possible assistance towards the maintenance of convertibility, and an unwise policy would be quite likely, in co-operation with other unfavourable circumstances, to precipitate inconvertibility.

A wise policy in this connection means simply a policy which allows all available metallic resources to be used to the full as a medium of exchange. An unwise policy is one which unnecessarily excludes from such use a part of the available metallic resources, as the Government of India appear to have contemplated when they said in para. 4 of their telegram to the Secretary of State dated 14th April 1914: "Further supplies of gold are not therefore desired by us"; which, as explained by Mr. Gubbay (*see* questions 1113 to 1115), meant that they desired to receive gold for non-currency purposes but not for currency purposes.

More briefly expressed, a wise policy in regard to gold is one which (at any rate until our present currency difficulties have passed away) would remonetise the sovereign, now temporarily demonetised in India.

I imagine that no member of the present Committee will doubt this. But if any were inclined to do so, it would be well for him to consider that at present silver is practically unprocurable, that the Government of India held at the end of September 1919 in their Paper Currency Reserve gold to the value of nearly 13,000,000*l.* (most of it in sovereigns, and the remainder capable of being coined at short notice at the Bombay branch of the Royal Mint), that further supplies of gold are either in transit to them or awaiting shipment, and that still further supplies may be expected to be placed at their disposal through the action of the Secretary of State and of the mercantile public. With these facts before him, let the doubter—if such there be—consider what the position would be if, with millions of sovereigns in their Paper Currency Reserve and perhaps large quantities of gold pouring into India every week, the Government of India had to declare their currency notes inconvertible, because, owing to misguided action on their part or faulty advice from the Indian Currency Committee, their gold had become in a critical period useless for currency purposes. Would it not be universally and justly said that, whereas the shortage of silver was perhaps due to irresistible causes, the inability—if it could have been avoided—to use sovereigns was the outcome of inexcusable negligence?

4. Taking it to be agreed that the sovereign ought, if possible, to be remonetised at least until the present currency difficulties have passed away, the next question is, What action is necessary for this purpose?

The primary condition to be satisfied if the sovereign is to be remonetised in India is that its value in relation to the rupee must for the time being be fixed. I have to my astonishment found, in persons who profess to understand the A B C of currency, doubt and hesitation on this point. But it is surely too obvious to stand in need of argumentative support. No competent person thinks that the currency note and the shilling could circulate side by side in the United Kingdom if the note were worth 20*s.* one week, 18*s.* in another, 22*s.* in a third. Similarly the sovereign will not circulate side by side with the rupee if its value in rupees is not constant.

The method by which this constancy may be secured is not so obvious as the necessity for securing it somehow. The usual method in the past has been to allow free import and coinage of one of the precious metals (or in India, which comes to the same thing, free import of one coin, viz., the sovereign), but to restrict by Government monopoly the coinage of the other. In the present circumstances of India this procedure would obviously not serve. If free import and coinage of gold were now allowed in India, the rupee value of the sovereign would presumably be governed by the cost in rupees of importing it. Assuming that it would depend precisely on (*a*) the ratio between the rupee and the pound sterling as expressed in Council drafts, and (*b*) the ratio between the pound sterling and the golden sovereign as expressed in the sterling-dollar exchange, the price during the last four months would have varied as follows:—

	Rs.
1st July - - - - -	12·765
1st August - - - - -	13·376
1st September - - - - -	12·368
1st October - - - - -	10·269

The reason why the method which stabilised the rupee price of the sovereign from 1898 to 1916 will not work now is fairly obvious, viz., that, whereas formerly the essential conditions (*i.e.*, constancy in the price of gold to the Indian user) followed automatically from the stability of the rupee-sterling exchange and the equivalence of the pound sterling and the sovereign, both these factors are now absent.

There is, however, no real difficulty in securing by an alternative method the desired constancy in the price of gold to the Indian user. All that is necessary is to continue in force the Gold (Import) Act, under which the Government is the sole recipient of gold imported into India, and to sell such gold at a price corresponding to the ratio at which it is desired to maintain the sovereign in circulation. The whole problem will then be to keep in circulation an equivalent to x rupees a gold coin containing x rupees' worth of gold.

Act XXII. of 1917.

This problem is really too simple to be worth calling a problem.[1]

5. It will be necessary later (para. 6 below) to say something about the theoretical objections to the continuance of the Gold (Import) Act. But for the present it seems better to hasten on to the next practical question, viz.:—Given the desirability of maintaining the Gold (Import) Act, so as to enable the sovereign to circulate at a fixed ratio to the rupee, what should the ratio be? There can be no possible doubt that, so long as the Indian currency position remains critical—*i.e.*, until the Government can readily obtain all the metallic currency needed to satisfy the public—the present statutory ratio of Rs. 15 to the sovereign should be maintained.

The simplest practical reason in favour of this is as follows:—Whenever the statutory value of the sovereign is reduced, as may be done when the currency position ceases to be critical, the procedure cannot fail to be rather elaborate. The primary enactment of the Statute will of course be to declare the sovereign legal tender for a stated number of rupees, less than 15. But in writing down the value of a coin which has been in active circulation for 20 years, it will be necessary to show the most scrupulous tenderness to existing holders. The Government will, in fact, have to undertake for a certain period to buy sovereigns from the public at the old rate of Rs. 15. How long that period of grace should be is a question on which opinions may differ. I should say that in so important a matter as the destruction by statute of, say, one-third of the value of a standard coin, the shortest possible period of grace would be six months and that probably a longer period would be better. Whatever the period might be, it is clear that, while it was running its course, the Government of India would be unable to use the sovereigns in its possession; because it could not possibly pay them out to discharge a debt of, say, Rs. 10 with the liability to receive them back for encashment at Rs. 15. The temporary immobilisation of the gold coin belonging to the

[1] A method of stabilising the ratio between the rupee and the sovereign without continuing the Gold (Import) Act in force might at first seem to be provided by Mr. Lucas's "Supplement to Memorandum C." But please see the criticisms thereon in the Appendix to the present Memorandum.

Government of India will be the direct and inevitable consequence of a reduction of the statutory value of the sovereign, whenever that measure may be carried out. No proof is surely needed of the unwisdom of carrying it out while the currency position is critical, in the sense explained at the beginning of this paragraph.

The practical argument just given seems to me so conclusive that there is no real need to supplement it; but I will mention briefly a further consideration. Important legislation regarding currency, especially if it alters the relative value of legal tender coins, ought to undertaken as infrequently as possible and only for clear and convincing reasons. At the best it is apt to cause mystification and indeed suspicion among the majority of the population concerned, who do not profess to understand the subject. For this reason it would be a mistake to reduce the statutory value of the sovereign until it is fairly clear that the reduced value will remain in force for many years The position of a Finance Minister in India who brought in a Bill, say, in 1920 to reduce the sovereign to Rs. 11 and another in 1921 or 1922 to reduce it further to Rs. 10 would be an unfortunate one. The rule which I ventured to commend to the Committee in my former evidence, viz., "Never be in a hurry in dealing with a currency question," surely applies here with exceptional force.

6. The propositions set forth in the previous paragraphs may be summarised as follows:—

So long as the currency situation remains critical, it is very desirable to restore the sovereign to, and maintain it continuously in, the position of a coin of circulation.

There appears to be no other method of doing this than—

(*a*) to continue in force the Gold (Import) Act;

(*b*) to reduce the market price of gold in India, by sales of gold to the public, to the equivalent of Rs. 15 to the sovereign and to maintain it at that rate;

(*c*) to continue in force the existing statutory ratio of Rs. 15 to the sovereign.

These measures should be adopted, because they would facilitate the maintenance of convertibility, while action of the opposite kind would increase the risk of inconvertibility.

I think that the nature and importance of the object of my proposals are clear; and that it is also clear that the suggested course of action is calculated to attain that object. I have been at great pains to discover the objections felt by other persons to the course proposed. As far as I can ascertain they are as follows:—

(*a*) The Gold (Import) Act is a restriction on the freedom of trade, and should therefore be abolished at the earliest possible moment.

(*b*) If the Government uses the Act so as to buy gold cheap and sell it dear, it is guilty of profiteering or of levying a latent import duty on a precious metal, which is opposed to all sound principle.

(*c*) It is well known that several firms and institutions carry on in ordinary times a lucrative business in the importation of gold to India, but cannot do so while the Gold (Import) Act is in force. This restriction of their opportunities of lucrative business is unjustifiable.

(*d*) So long as the Act is applied as in (*b*), gold is dearer to the "social" user in India than it would otherwise be. Nothing can justify this.

(*e*) It is wrong in principle that the sovereign should circulate in India as the equivalent of a number of rupees different from the number which the Secretary of State sells for a pound sterling when he sells Council drafts.

These are the objections which I have been able to gather. I have tried to set them down fairly as they have been put to me. If I have omitted any, it has not been advisedly. I do not think that I need criticise the objections in detail. The only important question is whether they should prevail against what I believe to be the only course of action which holds out any promise of the maintenance of convertibility in India. I am content to leave this question to the judgment of the Committee.

7. It is perhaps worth while to deal with two questions which I have encountered in my discussions with objectors and doubters.

(A) The first question relates to the standard of value which would prevail in India so long as the arrangements recommended above were in force and the correct description of the position of the sovereign thereunder. I do not know that this question is of much practical importance; but since it is sometimes asked, I venture to give my answer briefly as follows:—The standard of value in India is, and has for generations been, the rupee, since this is the money in which business is done, accounts are kept, and debts are recorded. So long as the rupee was kept at a stable ratio to gold, there was no great harm (though I think that the phrases were always rather confusing) in describing India as on a gold, or gold exchange, standard. (*See* para. 4 of my Memorandum A.) Now that the ratio between the rupee and gold is liable to variation, it is clearly better (as in my opinion it would always have been) to avoid the phraseology about "gold standard" and "gold exchange standard" and to describe India in plain unsophisticated language

as being on a rupee standard. On this view the sovereign, under the temporary arrangements advocated above, would be a coin subsidiary to the rupee. Since it would be in a certain sense an overvalued coin, *i.e.*, a coin circulating at more than its bullion value outside India (though not at more than its bullion value in India), it would, I suppose, be properly described as a token coin. I have observed among objectors and doubters some horror at the idea of a coin made of gold being a token coin and one made of silver being a standard coin. I can see no rational justification for the objection to such an arrangement. I could indeed see justification for objecting to the sovereign being *forced* into circulation. But no one, as far as I am aware, is in favour of such a foolish and impracticable scheme. Under old Standing Notifications of the Government of India[1] the holder of a sovereign can demand for it Rs. 15, in silver or notes, at the Calcutta and Bombay Mints, at the Calcutta and Bombay Currency Offices, and at the Reserve Treasuries at Calcutta, Madras and Bombay. He can also use it, as the equivalent of Rs. 15, in payment of sums due to the Government. There is no idea of these Notifications ceasing to be in force as long as convertibility is maintained, and I can see no reason for fearing that they would lead, as they might of course conceivably do, to the sovereigns which were put into circulation being returned by the public to the Government. On this point, see the end of para. 4 above.

(B) The other question is as to the period during which the Gold (Import) Act should remain in force. Since the argument in para. 5 above is to the effect that this Act and the system of which it forms part ought to be kept in force while the currency situation is critical, as defined at the beginning of para. 5, it follows that the operation of the Act might properly be allowed to cease when this situation no longer exists. It may perhaps be of interest to point out that there are two distinct and substantial reasons in favour of this course. One is the obvious one that, when the Government of India finds itself in possession of so much silver currency as to be able safely to regard its sovereigns as a mere *pro forma* and useless element in its reserve, there will be no reason to justify the continuance of a peculiar restriction of trade which serves no purpose other than that of vitalising the sovereign. The second reason is that, when the currency situation ceases to be critical, it will be quite easy, without continuing the Gold (Import) Act in force, to stabilise the sovereign, if so desired, in terms of the rupee either by the direct method advocated in Mr. Lucas's Memorandum, or, if sterling and gold are then stable *inter se*, by the much more convenient method of fixing the rupee in terms of sterling.

B. *and* C.—*Effect on Stability and Prices of Policy in regard to Gold.*

8. It was noted in para. 2 that questions of policy with regard to gold ought to be considered chiefly with reference to the three main objects of Indian currency policy generally, viz., convertibility, stability of exchange, and steadiness of prices. It has been shown in paras. 3 to 7 that the policy in regard to gold which is recommended in the present Memorandum will greatly help towards the maintenance of convertibility during the remainder of the present period of difficulty. As regards stability of exchange and prices, it would be possible to point out the probable effects of various conceivable policies; but I doubt whether anything of first-class importance could be said on these points. I therefore refrain from discussing the matter.

INDIA OFFICE,
8th October 1919.

APPENDIX.

NOTE ON MR. LUCAS'S "SUPPLEMENT TO MEMORANDUM 'C.'"

(See footnote to para. 4 of foregoing Memorandum).

Mr. Lucas's plan seems at first to provide a method of securing stability between the rupee and the sovereign without continuing in force the Gold (Import) Act. But it does not really do so.

Mr. Lucas's proposal is that the rupee should be sold without limit of amount for a fixed number of grains of gold, and that silver should be bought if and when a tola can be obtained for the same number of grains of gold. The statutory value of the sovereign in rupees would be reduced, so as to correspond to the fixed selling price of the rupee, but the effective introduction of the reduced statutory rate would be preceded by a period of grace of the kind described in para. 5 of my Memorandum above. On the expiration of the period of grace, the Gold (Import) Act would be repealed, and stability between the rupee and the sovereign would result automatically, according to Mr. Lucas, from the provision of rupees by the Government without limit of amount in exchange for gold.

[1] The text of the Notifications can be studied in Parliamentary Paper 495 of 1913 ("East India—Mint for Gold Coinage"), pages 66 and 67.

If the question is asked whether this plan would secure stability between the sovereign and the rupee without relying on the continuance of the Gold (Import) Act, the answer is clearly as follows :—

(*a*) During the period of grace the continuance of the Gold (Import) Act would clearly be necessary, otherwise importers would be able, without limit of amount, to import sovereigns at a cost of Rs. 10 or 11 each and to sell them to the Government for Rs. 15 each.

(*b*) On the expiration of the period of grace, stability between the rupee and the sovereign would depend on the sale by the Government of rupees for gold at a fixed price up to the full demand of the public. If this proved possible, stability would of course be maintained. But it is quite uncertain whether it would prove possible or not. If it did not, stability would not be maintained.

Mr. Lucas's error seems to me to be that he wishes the risks described at the end of para. 3 of my Memorandum, which are inseparable from a period of grace, to be voluntarily incurred as part of a scheme which—if that dangerous period were weathered—would leave the Indian currency system no safer than before.

I think that Mr. Lucas would have been better advised if he had proposed merely to substitute a fixed Acquisition Rate for gold for the present variable rate. This seems to me to be the essence of his scheme. Whether his scheme is a good one or not (and for various reasons I do not think that it is), it is quite compatible with the avoidance of the special risks involved in the premature alteration of the legal tender value of the sovereign for circulation in India.

APPENDIX XVII.

Memorandum by Financial Department, India Office, on the Modifications in the Indian Currency and Exchange System since June 1919.

In paragraph 8 of his Memorandum A, Sir Lionel Abrahams has summarised the measures taken to modify the Indian Currency system from the year 1916-17 up till the end of May 1919. Subsequent changes are as follows :—

1. *Changes in the Rate of Exchange consequent upon the continued Rise in the Price of Silver.*—During June and July the price of silver rose gradually from $53\frac{1}{8}d.$ on the 1st June to $55\frac{9}{16}d.$ on the 31st July. In August the advance was more marked. By the 12th August the price had reached $58\frac{3}{4}d.$, at which the cost of the rupee is very nearly 1*s.* 10*d.* The price of Council Drafts was then raised to 1*s.* 10*d.* This was in accordance with a statement made by the Government of India in September 1917 to the effect that the price of Council Drafts would be based roughly on the price at which silver could be bought by the Secretary of State. But the commercial community appear to have regarded the rate of 1*s.* 10*d.* as purely transitional and as a halfway house to 2*s.*, with the result that remittances from India were held back as far as possible and the difficulties of finding finance for the export trade became acute. The Government of India, therefore, recommended that if a further rise to 2*s.* appeared inevitable it should be made as soon as possible (*see* Viceroy's telegram of 26th August). Meanwhile the price of silver had been advancing. In the middle of September it was 61*d.* (*i.e.*, a price at which the cost of the rupee is 1*s.* 11·29*d.*) with an apparent tendency to rise still further. On the 15th September the rate for Council drafts was fixed at 2*s.*

2. *Acquisition of Gold.*—The removal of the embargo on the export of gold by the United States Government on the 9th June, the agreement made at the end of July by which the South African Gold producers were to send their output to London for sale, and the removal of restrictions on the free export of gold from Australia rendered practicable the following action for bringing gold to India :—

(A) From the 28th August a limited amount of immediate telegraphic transfers on India have been offered weekly for sale by competitive tender in New York, the proceeds being remitted to India in gold. The result of the sales up to date is given below :—

Date of Sale.	Amount offered.	Minimum Rate.	Amount of Tenders.	Average Rate realised.
	Rs.	Cents.	Rs.	Cents.
28th August	30,00,000	$39\frac{1}{2}$	1,63,20,000	43
4th September	40,00,000	40	1,89,25,000	43·12
11th ,,	40,00,000	41	71,30,000	41·98
18th ,,	40,00,000	$42\frac{1}{2}$	62,85,000[1]	42·5

[1] Tenders to this amount were made in error subject to minimum of 41. $11\frac{1}{2}$ lakhs were allotted subject to a minimum of $42\frac{1}{2}$.

(B) Purchases of gold (some for forward delivery) were made in the United Kingdom, the United States and Australia for 3,117,000*l.*

(C) On September 15th, the date on which exchange was raised to 2*s.*, the rate paid by the Government of India for the acquisition of gold imported into India on private account was raised to 11 rupees 11 annas. This price was fixed so as to include the equivalent of the premium on gold over sterling as measured by the dollar-sterling exchange. Broadly speaking, the effect of the change is to re-establish an effective gold point, and, by limiting thereby the possible rise in the cost of laying down rupees, to admit of the introduction of the sale of Council Drafts to the public by competitive tender subject to a minimum. It should help to mitigate difficulty of obtaining finance for the export trade.

3. *Sale of Gold in India.*—The Government of India announced at the end of August that sales of gold would be held fortnightly until further notice and that in each of the first three months not less than the equivalent of the gold content of 1,000,000 sovereigns would be offered for sale (detailed conditions of sale are given in the Viceroy's telegram of 23rd August). Since the announcement of the intended sales there has been a considerable fall in the bazaar price of gold (*see* paragraph 4 of Viceroy's telegram of September 13th).

4. *Changes in the Method of Selling Council Drafts.*—In paragraph 8 (*c*) of Memorandum A, Sir Lionel Abrahams has described the system of allotting the limited amount of Council Drafts offered for sale weekly and has given the reasons for the adoption of this system. During the war the system had a considerable effect in keeping exchange steady, because importers with homeward remittances to make effected them mostly through the exchange banks at the scheduled rates at which the latter were required by the Secretary of State to do business. After the war importers could not be expected to continue this practice, which involved pecuniary sacrifice, and a considerable business appears to have taken place direct between importers and exporters at rates appreciably above the scheduled rates, exporters being willing to pay to importers a premium on rupee credits owing to their scarcity. The war method of stabilising exchange having thus become ineffective, the Secretary of State announced on the 18th September that Drafts would be sold by open competitive tender, subject to a minimum rate which would be notified on the day of the sale and subject to the condition that no applicant might apply for more than 20 per cent. of the amount offered in each week or for less than Rs. 10,000. As stated in 2 (C) above, the acquisition rate for imported gold, the chief alternative form of remittance, serves as an automatic upper limit to the price of Council Drafts. The amount offered for tender on September 23rd was 100 lakhs of rupees and the minimum rate fixed was 2*s.* for Immediate Telegraphic Transfers and 1*s.* $11\frac{15}{16}$*d.* for Deferred Telegraphic Transfers and Bills. The lowest accepted tenders realised 2*s.* $0\frac{5}{8}$*d.* for Immediates and 2*s.* $0\frac{9}{16}$*d.* for Deferred Telegraphic Transfers and Bills.

Financial Department,
24th September 1919.

APPENDIX.

Telegraphic Correspondence between the Government of India and the Secretary of State.

1.

From Secretary of State to Government of India, 1st August 1919.

My telegram of 31st July. Exchange. If exchange is raised, it is my intention to seek concurrence of Treasury to my paying for gold imported into India a price which shall include allowance for premium on dollar as compared with sterling.

2.

From Secretary of State to Government of India, 22nd August 1919.

My telegram dated 1st August. Price for imported gold. Treasury have suggested that under new arrangements for selling South African gold in London, there will probably be in due course recognised London sterling market price for gold, and that Indian buying price should then be fixed at rupee equivalent of such current price plus freight and insurance. I am waiting for the present to see whether Treasury's assumption is realised. Papers are being mailed by Secretary's letter.

2. I have purchased through Hong Kong and Shanghai Bank 2,500,000 dollars American exchange, which will be converted into gold, the latter being shipped to India. This operation may be repeated. I will keep you informed.

3. Bank of England have unofficially expressed willingness to consider loan to me of between 1½ and 2 million pounds bar gold shortly leaving South Africa, provided gold is replaced by end October. I have no reason to doubt that, failing something unexpected, this transaction will be carried out. Further details will be telegraphed in due course.

3.

From Government of India to Secretary of State, 23rd August 1919.

Our telegram dated 13th August. Sales of gold. We are announcing fortnightly sales until further notice, and that in each of first three months not less than equivalent of gold content of 1,000,000*l.* will be offered for sale.

Paragraph 2. Notification also issued to day announcing first sales of minimum quantity of 325,000 tolas fine gold. Tenders receivable up to noon 3rd September for quantities not less than 500 tolas and not more than 325,000 tolas. Fine gold 990 or over or standard gold between 916 and 917 will be delivered at the option of tenderer. One-tenth part of tender payable as initial deposit. Tenders below Rs. 23.14.4 per tola of fine gold corresponding with Rs. 15 for gold at par of sovereigns will be rejected. For tenders at lowest rate proportionate allotment will be made, amounts less than 500 tolas being left out, and tenders not exceeding 1,000 tolas receiving allotment in full as far as possible. Tenders will be received in all provinces, but bullion will be delivered at Bombay or Calcutta Mint on payment of balance of price within one week of intimation of allotment.

4.

From Government of India to Secretary of State, 26th August 1919.

Following telegram from Bengal Chamber of Commerce :—

"Chamber desire strongly to press necessity of immediate action. Present position most "difficult and business seriously affected owing to uncertainty whether existing rate is "temporary or not. Chamber do not see any likelihood of matters settling down until "Government decide as to their final intentions, which doubtless depend on recommendations "of Currency Committee who have, it is understood, suspended their sittings. Chamber "again submit that circumstances justify immediate cable to Secretary of State impressing "him with necessity of Currency Committee concluding their inquiry and issuing their "recommendations with least possible delay." A subsequent message from Chamber states 15 per cent. premiums now being paid for cover, little being available even at this rate. Tea sales have been suspended and export business greatly restricted.

2. Position in Bombay also very difficult and business is not less unsettled as result of present uncertainty.

3. We do not support idea of assurance as to stability of rate pending final decision of Committee which Bengal Chamber of Commerce evidently have in mind as this might have effect of embarrassing future action of Committee, nor do we endorse suggestion that Committee should be hustled into insufficiently considered recommendations for permanent policy. At the same time we fully recognise difficult nature of present situation. Commercial community regards recent rise in exchange as purely transitional and 1*s.* 10*d.* as halfway house to 2*s.* Effect of this is that remittances are being held back to utmost possible extent and present weekly sale of Council Bills is therefore altogether insufficient to bridge over gap between bills offering and cover. Treasury position does not permit of increase of Council Bills without corresponding counter remittances by you. We have already taken 6 crores in Ways and Means advances from the Presidency Banks, but cannot count on substantial further amount. We shall open Treasury Bills next week, but have to face a cash deficit next month which, apart from receipts from Treasury Bills and allowing a crore a week for Council Bills, will be over 20 crores.

4. Most practical steps to remove present difficulty appear to be (*a*) to raise rate of exchange immediately to 2*s.*, and (*b*) large purchases and remittance of gold by you. Your telegrams regarding gold have been very welcome. If acquisition is on adequate scale this will ultimately put us in position to meet increased Council Bills if necessary and to make larger sales of gold, which would tend to react favourably on our silver balance and indirectly to allay fear of instability of exchange. Meanwhile, in the absence of further considerable advance in London of price of silver resulting from continuing fall in London-New York exchange, action as in (*a*) and (*b*) in conjunction appears most hopeful method of releasing remittances which are at present held back and of restoring confidence to market. If, therefore, as seems probable, a rise to 2*s.* is inevitable, we think it cannot be made too soon.

5. Incidentally we may remark that recent developments, more particularly marked depreciation of the £ sterling as measured in gold with the resultant break in London-New York exchange and effect of latter in advancing price of silver as quoted in London, appear

to raise in an acute form fundamental problem referred to in Lucas' supplementary memorandum for Currency Committee, viz., whether the rupee should be stabilised in terms of gold or of £ sterling.

We recognise that in so far as gold is obtained for India, this may, owing to its export or diversion from United States, tend to depress London-New York exchange, and consequently to give a serious degree of instability to the rupee exchange so long as it is linked on to the pound. Nevertheless, we regard it of first importance that we should obtain at present time as much gold as you can procure, as it seems to be becoming increasingly evident that no other satisfactory alleviation of our difficulties can be found.

5.

From Secretary of State to Government of India, 1st September 1919.

Exchange. I have pointed out to Exchange Banks that practice described in paragraph 4 of your telegram dated 19th June is at variance with understanding under which Banks enjoy, for present, exclusive rights of buying Council Drafts. The six British Exchange Banks and Boulton, Yokohama Specie Bank and International Bank and Comptoir have sent joint telegram to their branches in India and Ceylon, and to Tata Industrial Bank, as follows:—

"India Office draw attention to the system of cross contracts recently instituted under which a certain profit accrues to the Banks, on the unimplemented portions thereof, as contrary to the spirit of the understanding between the India Office and the Exchange Banks. Please, therefore, discontinue the practice."

6.

From Government of India to Secretary of State, 4th September 1919.

Your telegram of the 1st ultimo, paragraph 1. Your telegram of the 22nd ultimo. Price for imported gold. We are very glad that you have this matter under consideration. There is no doubt at present higher cost importing funds into India in form of gold to be tendered to Government as compared with your Council rate enhances difficulty of making latter rate effective. It has in fact been strongly pressed on us that high premium at present charged for cover roughly represents difference between Council rate and cost of laying down gold to be acquired by us. We think that there are reasonable grounds for hoping that if gold acquisition rate were equated to Council rate by including present premium on gold this would go a long way towards eliminating premium cover, effect of which and consequent dislocation of trade makes whole question a very pressing one. Unsettlement is affecting import trade also since effect of premium is to cause postponement of business in anticipation of higher rate.

Paragraph 2. Bengal Chamber of Commerce strongly urge great desirability of early action in above direction and will probably make direct representation to you on the subject. In the circumstances, we hope settlement of question will not be deferred pending recognition of definite London sterling market price for gold. Necessary allowance could be meantime calculated as proposed in your telegram of the 1st ultimo with reference to premium on dollars as compared with sterling which is presumably approximate measure of premium on gold as compared with sovereign.

Paragraph 3. Your telegram of the 1st instant. Sale of telegraphic transfers on New York by Bank of Montreal. We welcome increase in allotment from 30 to 40 lakhs of rupees and we have no objection to meeting Council Bills to any extent in this form so long as proceeds are being shipped in gold.

7.

From Secretary of State to Government of India, 4th September 1919.

An important change in method of business of Exchange Banks was outlined in my telegram of 1st September. I arranged this in conference with banks who were also invited to make any representations as to desirability that present practice regarding sale of Council Drafts should be modified. Some change will, I assume, be suggested because importers can now sell cover at a premium, whereas banks are restricted to rates of profit allowed under my schedule of rates, and cannot, as hitherto, make corresponding profit by method described in paragraph 4 of your telegram of 19th June. Any proposals received from the banks it would be well to be prepared to deal with expeditiously.

2. Possibly banks may ask for release from restrictions of scheduled rates. It would not be practicable to continue the monopoly of the banks and allow them to exploit it by selling at competitive rates drafts brought from me at fixed rates, and therefore such release would involve abolition of approved list of applicants for Council Drafts.

3. If, as before 1917, applications are received from all comers, rates could be either competitive, subject to a *minimum* or fixed. The latter plan is open to the objection stated at end of paragraph 2, which, even when mitigated by diffusion of profit among more numerous beneficiaries, would still be strong. It would seem a better plan to sell at competitive rates subject to a minimum corresponding to the rate desired by the Secretary of State to be established from time to time, *e.g.*, 1*s.* 10*d.* for Telegraphic Transfers at present. But in order to avoid risk of excessive rise, it might be arranged to pay for imported gold a price genuinely corresponding to the desired rate of exchange after all factors, including American premium which is omitted from present unreal rate, have been included. I am telling Treasury that I hold myself free to fix price of imported gold in manner indicated, so as to be free to introduce the scheme if, on full consideration, it appears desirable.

4. It might be necessary to make a regulation that no applicant should tender for more than one-sixth or one-eighth of amount offered, so as to prevent any one firm, British or foreign, from obtaining under scheme in preceding paragraph the whole allotment for one week by outbidding others.

5. I should be glad of your opinion on suggestion in paragraph 3.

8.

From Government of India to Secretary of State, 9th September 1919.

Your telegram of the 4th instant. Exchange. Paragraph 3. We agree entirely with suggestion for competitive tender for Council Bills subject to a minimum rate and also to important proviso mentioned by you that acquisition rate for imported gold be made effective. From our telegram of 4th instant you will have seen since that we fully concur, attaching highest importance to latter measure at present juncture. We think action on lines contemplated by you will be received here with much relief as a distinct step towards solution of present difficulties.

Paragraph 2. Observations and suggestions in following paragraphs are put forward for your consideration but do not qualify above agreement with proposed action.

Paragraph 3. We are not sure how far remarks in last sentence of your paragraph 1 indicate your intention to postpone action on these lines until you are moved by Exchange Banks to modify present system of control. Inasmuch as such proposition will apparently *ipso facto* dispose of any reasonable complaint of Exchange Banks regarding continuance of control of rates and in view of urgency of problem, we suggest desirability of your taking action independently of any representations by Banks.

Paragraph 4. Acquisition rate fixed as proposed would have to be continually varied with reference to premium of gold as compared with pound sterling. We should much prefer to eliminate this uncertain factor. We fear banks and others may hesitate to freely enter into exchange transactions based on their gold operations if acquisition rate is liable to vary from week to week with variations in dollar sterling exchange. We should, it is true, allow shipments made previous to each successive change to be acquired at previous rate but nevertheless possibility of change of rate before shipment could be arranged would, we fear, militate against free use of gold for exchange purposes. Exchange operations are thus likely to be hampered by fluctuations in gold acquisition rate due to variations in premium of gold to a greater extent than by fluctuations in Council Bills rates due to same cause.

Paragraph 5. For above reason we should prefer to retain acquisition rate at its present figure of 1 rupee for every 10·1007 grains troy fine gold or thereabout adjusting your minimum rate for Council Bills on this basis and allowing that rate for present premium on gold. In point of fact, business has been for some time largely done at a net rate in the neighbourhood of 24½*d.*, whether by payment of premium cover or by Exchange Bank double transactions which have been now prohibited. Such increase in the nominal Council rate would have been therefore, to a considerable extent, discounted. A further important incidental advantage of making gold acquisition rate pivot arrangement is that silver could then be purchased up to the gold parity so established without your power to purchase being affected by any further depreciation in sterling dollar exchange.

Paragraph 6. You can alone judge how far the above suggestions would prejudge consideration of case by Currency Committee. It might be, however, a positive advantage for them to have before them a month or so's experience of actual working of such a system.

Paragraph 7. Whether or no you accept above modifications, we welcome action on lines proposed by you as being important step in direction to which recent trend of events makes it seem likely that Currency Committee will have to look for solution, inasmuch as your proposal for recognitions of discount at which pound sterling at present stands as compared with gold and fact that to secure real stability it may be necessary to place rupee on some permanent gold basis. It will, moreover, pave the way for the ultimate object which you no doubt have in view, namely, coalescing of various rates for gold, *i.e.*, imported legal tender and bazaar rates.

9.

From Government of India to Secretary of State, 13th September 1919.

Your telegram dated 1st September. Regarding (A) Effects of raising exchange to one shilling and tenpence and sale of New York Councils and (B) Effects of sale of gold in India.

2. (A) has been to large extent answered in our telegrams dated 26th August, 4th September, and 9th September. Dominating factor of situation has been uncertainty as to future rather than increase in rate at which you sell your Councils, since that rate will remain ineffective until rate at which funds can be imported by gold is equivalent thereto. Consequently it is difficult to estimate effect which rise to one shilling and tenpence has had on exports. Indirect effect, compared with uncertainty due to further rise in silver and other causes has been that remitters generally have regarded one shilling and tenpence as merely halfway house to two shillings and have consequently held up their remittances even to a greater extent than formerly in spite of high price paid for cover. Premium paid therefor, which before change in rate was three to five per cent., is now anything from ten to fifteen, actual rate of exchange at which business is being done being from two shillings to two shillings and one penny. Only limit on what importers can ask for their cover is imposed by rate at which gold can be brought into India.

3. Effects of sale of New York Councils have not been so far apparent. Exchange markets regard it as a factor making for ease, but actual amount being sold is at present too small to produce substantial effect. We understand Exchange Banks are much opposed to sale of New York Councils by tender on the ground that we are trafficking in exchange at their expense and are giving premium to American firms. We attach little importance to such complaints, and any substance that there may have been in them will be removed by system of competitive tenders for Councils adumbrated in your telegram of 4th August.

4. As regards (B), it is too early yet to judge properly effects of sale of gold. Quoted prices in Bombay dropped from about Rs. 31 per tola fine gold, when sales were first announced, to 27. Average rate obtained at first sale was only Rs. 26·12 as. Controller of Currency is under the impression that larger dealers stood out at first sale in order to see what would happen.

APPENDIX XVIII.

Memorandum by Mr. Manu Subedar, B.A., B.Sc. (Econ.), Barrister-at-Law, Fellow of the Royal Statistical Society, Representative of the Indian Merchants' Chamber and Bureau, Bombay.

1. I am putting in a memorandum supplementing what has already been submitted by the Indian Merchants' Chamber, and I am anxious to confine myself to the memorandum and to the points mentioned herein below rather than follow the set of questions which have been prepared by the Committee, because these questions seem to me to be prepared in such a way as to lead a witness on certain preconceived lines. From my standpoint some of them are merely academic, and others tend to go into details which would obscure the principal point which I wish to make, viz., that the currency and exchange policy pursued by the Government in the last 10 years has been most unpopular in India, that it has acted very unfavourably on Indian interests, and that the warnings uttered and criticisms offered by Indian merchants from time to time have been disregarded and their sentiments and views ignored in the past. The constitution and the manner of report given by the Chamberlain Commission caused profound disappointment in India, and the numerous emergency measures adopted by the Government of India during the years of the war and subsequently, were taken without any consultation with or without the approval of Indian commercial public opinion. Even with regard to this Committee, it has been a matter of widespread regret amongst mercantile circles that not a single Indian merchant is sitting upon it, although their interests are vitally affected by any recommendation which may be made. The constitution of this Committee and their procedure were the subject of universal legitimate criticism in India and were regarded as only the latest example of the manner in which Indian opinion and sentiment have been deliberately ignored by the authorities in the past.

2. *Secure Indian Co-operation.*—It is likely that in the examination of details the Committee may overlook what in our minds is the principal issue, viz., how far, if at all, any measures, however wisely conceived they may be, will bring about the desired results without a very extensive co-operation from the Indian mercantile community, Indian financiers, and Indian industrialists. What is called "Indian trade" in London merely refers to the European export and import houses, but it is overlooked that there is a distinct set of interests

represented by Indian business-men and industrialists, and no programme of currency or exchange policy could be either popular or could adequately safeguard the interest of India as a whole without the Government requisitioning frankly the co-operation of Indian business-men.

3. *Unfair Influence of the Bank of England.*—What the Indian mercantile community have always resented, not merely on the grounds of sentiment, but because it actually touched at various points their interest, has been the dominance of English financial interests on the currency and exchange policy of the Government of India. The hostility of the Bank of England to the sending out of any gold to India, either from their own reserves or from the weekly shipments to London from the Continent and South Africa, has aroused a sentiment of keen regret and bitter disappointment in the mercantile circles in India. The Bank of England was anxious to hold Indian gold in the United Kingdom and to use it with the mere technical reservation of calling it "ear-marked" for India. The Bank of England have used their privileged position to secure a contract with the gold mining companies in India which is very unfair to that country and which any Government working solely for the interests of India would have disallowed.

There is a general and well-founded belief amongst the merchants in India that the Secretary of State and his financial advisers have been unable to hold their own against the pressure which is being brought upon them by the Bank of England. The influence exercised by the English joint stock banks, and the policy pursued by the Secretary of State for India has not been always to the advantage of India. These banks have used large funds belonging to India and transferred to this country by the Secretary of State under the advice of the Financial Committee and of others in excess of all legitimate requirements at this end. The London joint stock banks do not have large Indian exchange business, and they have consequently supported the policy of the Bank of England against the sending out of any gold to India, since the sending out of such gold would tend to restrict credits in London by stiffening the bank rate and the market rate of discount. They have favoured everything that would increase the financial operations of the India Office in London, and either through ignorance or through design they have favoured the policy pursued in the last 10 years to the disadvantage of Indian interests.

It is a misfortune that the standard of currency in India should be the English sovereign and not a distinctive gold coin of an equivalent value, because in the opinion of Indian merchants the British Treasury and the Royal Mint have exercised an altogether sinister influence upon the question of a Gold Mint for India, and the Secretary of State has not been in a position to safeguard Indian interests or to respect Indian sentiment in this regard. It is distressing to note that quite recently the operations of the Gold Mint in Bombay have been suspended as a result of certain correspondence between the Royal Mint and the Government of India.

Sterling borrowing in London, the purchase of large stores in England, and various other factors have led to the concentration of India's financial operations here in a manner which has been prejudicial to our interest.

4. *Presidency Banks.*—The proposed amalgamation of the Presidency banks referred to in the issue of the London *Times*, dated 20th September 1919, cannot be welcomed by the Indian merchants in view of the persistent exclusion of Indians from the directorate of these banks, and in view of the race discrimination against Indians made in the matter of the staff and in the matter of accommodation given to business-men. Nobody can have anything to say against any amalgamation merely as a matter of private business, but these institutions have been using public funds in the past, and have been favoured by the Government in numerous other respects, and they have failed to give adequate public return, or to act in a spirit of pure banking. Apart from this discrimination, they have failed to open branches in the interior by which the much-complained-of hoarding would be reduced. There has been a great demand for change in the Presidency Banks Act, and it is known that the Government have given various facilities beyond what they were bound to give by law to these banks.

The Secretary of State should insist, and this Committee should therefore recommend that the Indian directors on the Board should not be in a minority, and colour distinction should disappear in respect of the staff. Until these conditions are secured not a single rupee from Indian public funds should be lodged with the Presidency banks or their amalgamation.

5. *Silver Purchase: A Public Inquiry Wanted.*—Reference has been made in the body of the Chamber's representation to the grave defects in the method of silver purchase for Indian currency purposes for some years past. The constitution of the silver market in London is very unsatisfactory, the number of people in it being small and the distinction between broker and principal being rather vague. The market has been governed largely by visible supplies in London, a factor which during the war was most uncertain and liable to manipulation. The market has shown itself most sensitive as in recent variations in the course of a day by over 3*d.* per ounce. It has been always against the Government of India, whose demands could be anticipated by the visible stock of rupees in India and by such official information as the connection of some of these firms of brokers and dealers with the India Office can secure them. It is a commonplace remark in the Indian bazaars that the largest additions to Indian

coinage have been made at top price of silver during the last 15 years. It is a moral belief in India that everything has not been right with the silver purchases on behalf of India, and the Indian mercantile community will be gratified by a public inquiry into the silver purchases on behalf of India during the last 15 years. Time alone can show to what extent this injurious method of purchasing silver adopted by the Secretary of State and his financial advisers aided the recent rise in the value of silver. It would also be of interest to compare the price at which the unusually large amount of silver was purchased for subsidiary coinage for the United Kingdom with the price paid by the Secretary of State for India during the last five years.

6. *Freedom for the Government of India from the leading strings of the India Office and their Financial Advisers.*—In order that Indian interests can be safeguarded and Indian sentiments respected, it is essential that the decision as to how much silver should be purchased, what funds and how much should be located in England, what loans should be raised and on various other matters which are at present being determined by the Secretary of State should rest with the Government of India. Even as it is at present constituted, the Government of India cannot altogether ignore, as the Secretary of State for India has often done, the criticisms coming from Indian commercial circles. The present system is grossly unfair to India and involves a very large sacrifice of her interests from time to time to the exigencies of British financial and bullion interests. The Secretary of State has no means at present of knowing the views of Indian merchants on any question.

7. *The Finance Committee of the India Office.*—The constitution of the Finance Committee of the India Office is most unsatisfactory from our standpoint. Half its number should be made up by Indians selected solely for their knowledge of finance. If the iniquitous system of financial management from London is to continue, then this reform of the constitution of the Finance Committee should at least be carried out without delay.

8. *Consequences of Raising the Exchange.*—The raising of the exchange value of the rupee affects very adversely all classes of people in India. The farmer and the cultivator have to pay the same dues to the Government, whereas they would realise for their produce a very much smaller amount in Indian money. The incidence of taxation will thus be greater, and in some cases unbearable owing to bad seasons. The Indian producer and manufacturer is saved from catastrophe owing to difficulties of freight and other difficulties which prevent deliveries from Europe and other parts of the world. He is, however, not safe against Japan, who has been pouring in her bounty-fed and subsidised goods, capturing the markets which were formerly supplied from the United Kingdom and other countries, and also destroying the new industrial effort of which we are seeing the beginning in India. The export merchants lose heavily on their stocks owing to the high exchange and owing to uncertainties involved in regard to the future. There is little advantage on the imports, and even if there was, it is retained by the merchants and middlemen. The import commodities are not used by the bulk of the population, and the total value of imports as compared with the exports is much smaller. Any trifling advantage on the home charges is wiped out by the unwise financial operations of the India Office at this end, involving the writing down of sterling securities, the lending out of Indian money at low rates, the unduly heavy prices paid for silver and for numerous items of store and railway requirements.

The exchange remains high, amongst other things, so long as prices are allowed to go on rising in the United Kingdom by the excessive issue of Treasury Notes without any gold backing. The flow of British capital into India for industrial and other purposes has been temporarily stopped altogether, and the prosperity which would have attended that country by the use of cheap capital from the United Kingdom has been checked. Further, a high exchange gives unfair advantage to silver-using competitors of India.

All these results are aggravated by any talk of a further rise, and by the uncertainty attending the intention of the Government with regard to the future. It is imperative that there should be a declaration of policy stating clearly what the Government intend to do and what is their objective, and explaining the manner in which they propose to reach it.

9. *Remedial Measures.*—There has been some misunderstanding on the remedial measures suggested by the Indian Merchants' Chamber in their representation. The Chamber suggest neither the debasement of the rupee nor inconvertible notes. Either of these would tend to cause grave discontent and an acute political feeling. What they do suggest is the stoppage of further coinage of rupees and the minting of a new two- or three-rupee coin with a smaller amount of silver, so that even if silver rose to 70*d.* or beyond, there would be no danger of these new coins being melted down. The ordinances by which notes have been issued against English Treasury bills should be repealed, and steps should be taken towards deflation. Any new demand for currency should be met with gold notes, against which gold bullion or sovereigns should be kept in India, and under no circumstances in the United Kingdom, United States, or any other foreign centre.

10. *Free Gold and Silver.*—The restrictions on the private import of precious metals into India were ruinous to India, having been dictated by extraneous interests. The value of the rupee as the fifteenth part of the sovereign, and of the sovereign as equal to fifteen rupees, was fixed by law, and there were not enough valid grounds for altering it. In India it has been

regarded as a distinct breach of faith. The import of gold and silver into India on private account had been very large before the war, and their reduction since, owing to unwise prohibitions, has removed one of the important import items when it was most needed. Government profiteering out of gold bullion should stop, and imports by banks and others should be made free. The mint price of the sovereign, equal to fifteen rupees, should, at an early date, be restored. If there is any apprehension of rupees being exported from India, such an export should be prohibited, and the levy of a heavy export duty on the export of silver bullion may be considered.

In the meanwhile the import of silver into India should be free, and the import duty now levied should be abolished.

11. *India Penalised.*—The problem of Indian exchange causes melancholy reflections. So long as the war lasted and England wanted Indian foodstuff, raw materials and munitions, the exchange was deliberately kept down. By restricting export of articles—some partially, others totally—care was taken to prevent a very large balance in favour of India. Indian wheat and other articles were acquired compulsorily by means of control and paid for at a price lower than the world price. Indian merchants were particularly penalised and actually paid lower than English merchants, as in the case of hides (*vide* letters of Mr. A. A. Peerbhoy in *Bombay Chronicle*). Later, some trades, done largely by Indians, like the pearl trade, were wantonly interfered with by a total prohibition of exports. Indian trade with countries to the north-west of India and with Central Asia was paralysed by the prohibition of the export of roubles. Credits in favour of the United Kingdom were created by the 100,000,000*l.* "gift" and the 45,000,000*l.* war contribution, and the investment in London to the hilt of funds from the Gold Standard Reserve and the Paper Currency Reserve. Wealth which India would have secured during the war was thus prevented from reaching her, and she was bled white in overt and covert manner. It was India's duty to co-operate with the United Kingdom against the common enemy, but we failed to find since the declaration of the armistice the reciprocity on which alone such co-operation could rest.

Now, when it suits the United Kingdom to become an exporter to India, the exchange is raised in an arbitrary manner and successively without any regard to India's real interest. It is our considered view that if gold had been allowed to come to India freely, the necessity for manipulating exchange would not have arisen. As it is, the whole affair has been altogether one-sided, presenting the spectacle of a rich and politically powerful country like England taking advantage of a dependent and poor country like India.

12. *Sell back Indian Securities to India.*—England has purchased more from India than she is willing to pay for, and the problem is simple enough, if it were dealt with firmly. When England was buying material from the United States, the English Government mobilised American securities and sent them across and created credits in New York. No serious attempt has been made in regard to the settlement of the large balance in favour of India for which England must pay. The large amount of gold which arrives in London every week is allowed to go to the United States in liquidating the debt owing to America, whereas the legal prohibition to the free import of gold into India is still continued.

The natural market for South African gold is India, and though it is an advantage to the South African mines and their bankers to sell this gold to India, the Government of India have created an artificial bar to this sale entirely in the interests of British finance.

If England is not prepared to send out commodities to India to the extent of her indebtedness, she must turn to capital items and send out securities.

13. *Send out GOLD.*—No attempt has been made by the Government of India to encourage the purchase of rupee securities in London or of sterling railway securities or of industrial securities relating to tea and rubber plantations and various other concerns by Indian investors. If the problem was viewed as a serious one, the Government of India would have proceeded to make some suitable scheme towards this end, and to popularise amongst the Indian public the investment in Indian securities which were hitherto held in England. They have, however, been content to deal with the problem in a more violent manner by merely a stroke of the pen. Failing capital items like securities, England must be prepared to part with gold either from the weekly arrivals or from the Central Reserves held by the Bank of England. It is not suggested that large blocks of gold should be sent out immediately from London, but a declaration that one million pounds' worth of gold in sovereigns would be released every week by the Bank of England for India for some time would in itself tend to ease the grave situation which has arisen. This would secure among other things a serious check to or even a fall in the value of silver.

The results in England of the adoption of this expedient would not be altogether undesirable. Owing to the reduction in the central reserves, credit would tend to be restricted to a certain extent, and owing to this, the enormous rise of prices which has come about would tend to be checked. This would be all to the good from the standpoint of English labour trouble and of profiteering, against which all other efforts of the Government must come to naught.

It would tend to create a stream of exports from England to the East in liquidation of the balance still outstanding, and by this natural means, worked through the price levels and the bank rate, the normal exchange would be restored before long to 1*s.* 4*d.* from the dizzy height of 2*s.* and over, to which it has been wantonly carried.

This is the only fair remedy which can be suggested. If this remedy is not adopted it would be legitimate to infer that it is not the intention of the Secretary of State and his financial advisers to safeguard the interests of India whenever they conflict with those of English finance.

It would then be tantamount to the dictum that prices and bank rate in India must fluctuate whichever way it suits for the time being the commercial and financial interests of the United Kingdom. This experience would be nothing new to us, but it is now more widely understood and resented in India than it ever was before.

14. *Wanted, a Central State Bank.*—The Secretary of State for India has undertaken at present a task altogether beyond his ability and beyond the means in his hands. The fact that India has to pay for the Home charges is not enough to warrant the excessive interference with currency conditions and the undertaking of the responsibility for the maintenance of exchange by the Secretary of State. This responsibility he has discharged most unsatisfactorily in the past, and the much-vaunted Gold Exchange Standard has on several critical occasions absolutely broken down. Trade can take care of itself in all countries without the Government offering to do this or that for it, and the machinery, that can handle the problem of financing trade best, is independent banking institutions. Since all that has happened could not, however, be wiped out in one day, the best mode of reaching suitable natural conditions would be through entrusting to a central state bank the financial operations hitherto done by the Secretary of State. On the directorate of such a central state bank there should not be less than half Indian business-men, who would be in a position to interpret Indian sentiment and feeling with regard to currency and exchange policy.

The objections against the establishment of a state bank which existed some years ago no longer exist. Enough capital could be found in India, and what is more, all of it could be suitably employed. The Government of India have to our regret wantonly ignored this issue and omitted to appoint the Committee which was suggested by the Chamberlain Commission to frame the scheme of a central state bank.

15. *Remove Funds to India in Gold.*—The funds at present kept in London for the Gold Standard Reserve and the Paper Currency Reserve should be with the least possible delay transferred to India and located there and kept in gold. The trivial advantage of interest earned by securities is more than wiped out by the recurring writing-off of the capital value of these securities, and there would be few advocates now for the maintenance of these funds in the form in which they have been in the past. Their being kept in London is a matter of grave injustice to India and it should be now corrected.

The investment in English Treasury Bills from the Paper Currency Reserve should be terminated as they matured, or prior to it, by the discounting of these bills in small blocks, and the funds so secured should be transferred to India in gold at the earliest possible moment.

It may be pointed out that everything that tends to deflation in the United Kingdom and higher bank rate would lead to easier exchange conditions with India. On the other hand, the same result would be secured by the release of Government funds to the public in India through banks. The lending out of such funds from the Paper Currency Reserve under certain circumstances was recommended by the Chamberlain Commission and urged by the various Chambers of Commerce. If there is no discrimination against Indian banks or against Indian business-men, the Indian Merchants' Chamber would welcome this step.

The much-vaunted Gold Exchange Standard, which was called "ideal" and "scientific" by its advocates, has altogether broken down. Those who favoured its perpetuation gave much thought to the consideration of the total balance of trade against India owing to bad seasons and crises. This led them to urge the concentration of the several funds of India, particularly the Gold Standard Reserve into London, to their investment in London in loans and securities. They did not contemplate the effects of a war or a crisis in England or a large balance of trade in favour of India. Indian feeling has been all along against this arrangement, and now that it has failed, it is hoped that steps would be taken to alter it, and a "managed" currency should give way to natural conditions.

20th September 1919.

APPENDIX XIX.

Memorandum by Mr. J. Campbell, O.B.E., I.C.S.

1. *Experience.*—Six years in a typical Oudh district as Deputy Commissioner. The district is pre-eminently a district of large estates held by taluqdars, and is therefore in many respects different from districts in Agra or in the Punjab. Speaking very broadly, Oudh is less advanced, and conditions are less competitive and more patriarchal, than in other areas. I started the work of food control in the United Provinces, and held the appointment of

Director of Civil Supplies there for three months from June 1918. My headquarters were at Cawnpore, where I had six years previously been Chairman of the Municipality for about 3½ years. While in Oudh I had Court of Ward estates under my control with an annual rent roll of about 15 lakhs. I have had no experience of currency matters, and no touch with "all India" conditions as regards any subject, for over 11 years.

2. *Condition of the People.*—India has prospered greatly during the era of high prices, which began about 1905 and has continued ever since. The standard of living of all classes has obviously increased. People are better housed, better fed, wear better clothes. use more metal vessels, travel more, and enjoy some greater degree of immunity from the most exhausting labour than they formerly did. In the towns, for example, women used to start about 3 a.m. grinding the grain required for the household—the typical sound at dawn was the rush of the hand mills. Grain is now ground in small power mills. Similarly, cotton used to be cleaned, teased, and spun at home, and the twang of the bow was heard from almost every house. They now buy their cloth from hand loom weavers or from the local shops, which sell country-made or foreign cloth. Field labourers used to be employed on the very exhausting work of irrigation from wells, by drawing up water in large leathern buckets; that is rarely seen now.

The classes which have prospered most are probably the traders and manufacturers, the cultivators, and the agricultural labourers. Domestic servants, skilled workmen in factories, professional men who confine their activities to their professional work, clerks, and all who live on more or less fixed incomes, have not participated to the same extent in the general increase in prosperity. Speaking very generally, the country has probably improved its position relative to the town.

3. *Effect of High Prices.*—While prices were rising, and before they attained their present abnormal level, the effect was generally beneficial. The cultivator—despite the pernicious system under which he is often deprived of a fair price for his produce—did, in fact, obtain largely increased sums. Agricultural wages responded surprisingly quickly to the higher level of prices, and rose, I think, more than the cost of living. Articles of English or foreign manufacture in which the cultivating classes, and the people generally, were interested did not rise in price to the same extent as local produce. One of the most common comments among small merchants and purchasers after the effects of the war on the prices of imported articles had become apparent was to the effect that they had hitherto had no idea of the extent to which they were indebted to England for cheap supplies of excellent quality. As one small trader put it, the politicians (he referred to the Congress) had been all wrong about the "drain." India had been draining England, and the first result of the partial cutting of the English trade connection had been widespread inconvenience extending down to the very poorest classes of the community. He instanced needles as a case in point. Formerly sold at (I think) one pice for 20, they were then selling at a pice each. So with dyes, which the small cultivators used largely as a cheap means of providing the gaudy-coloured clothes their women wear at festivals. The price had increased about 30-fold.

A further effect became apparent in the later stages of the war. I am trusting to my recollection, but think it is correct to say that those in a position to judge were unanimous that by about April 1918 the price of English piece goods had risen to such an extent that the cultivator could no longer purchase. The Manager of the National Bank of India, Cawnpore—which had most of the Cawnpore foreign piece-goods trade in its hands—held this view very strongly; and many Indian piece-goods merchants with whom the question was discussed confirmed his opinion. English piece-goods were selling at Calcutta at a price one-third less than it would have cost to import similar goods from England at that time; and the supplies in India, despite this, were not being marketed freely. The purchasers were well-to-do people; the cultivating classes and the middle class generally held off buying. Railway transport difficulties did not seriously affect the position; arrangements (which Cawnpore piece-goods merchants and the National Bank assured me were sufficiently satisfactory) had been made with the East Indian Railway Company, and Cawnpore stocks were fair. The difficulty was that the purchasing power of the cultivator and middle classes generally had been exhausted at the prices then ruling.

It is perhaps unnecessary to refer in any detail to the effect of the very high prices now in force in India from the administrative aspect. The possibility of serious internal troubles, due to this cause, and pending wages and other economic adjustments, is obvious, and is illustrated by numerous events in India itself, and in practically all countries Western and Eastern. I do not suppose there is a single district officer in India who has not had occasion to consider the possible effects of the prevailing high prices upon the internal peace of his district, and whose whole district policy has not been largely conditioned by this. The primary danger, of course, is as regards the towns.

4. *Effects of High Prices, as illustrated by Famine Administration.*—During recent years Local Governments have been laying stress on the greatly augmented power of resistance of the people to famine conditions. This appears to supply a general and fairly searching test of the broad effect of recent economic changes in India. My own experience is entirely in accord with the views expressed by the Government of India and the Local Governments. During 1913–14 conditions in the Kheri district pointed unmistakeably to famine. The rainfall

data was as bad as in previous famine years, and prices were much higher. Yet there was no famine and no serious hardship. Labour was in great demand; wages were high; there was no wandering or emigration; and the crime returns were approximately normal. No practical difficulty was experienced in collecting rents on the Court of Wards estates.

In this connection the following figures may be of interest:—

Proportion of expenditure on gratuitous relief to expenditure on relief works during recent famines:—

Relief Works.	Famine Years.	Gratuitous Relief.
100	1907–08	31
100	1908–09	62
100	1913–14	60
100	1914–15	156

Number on relief works, present famine, taken from the latest return as compared with the number in receipt of gratuitous relief:—

Relief Works.	Gratuitous Relief.
100	316

These figures are not strictly comparable, but they suggest that there has been a very large increase in the proportion in which gratuitous relief is given, and the causes for this appear to be—

(*a*) That the improved condition of the people has rendered it unnecessary to declare famine over large tracts, where it is, however, necessary to provide for the aged, infirm, &c., by the grant of gratuitous relief. That was the explanation given by the Government of the United Provinces.

(*b*) That the high wages offered in industrial centres for unskilled men have led numbers of cultivators and labourers to abandon their villages and to seek employment at these centres, leaving their families unprovided for, temporarily in some cases, permanently in others.

Despite unfavourable agricultural conditions, and despite a range of prices much in excess of the highest level attained during any recent famine, the numbers in receipt of relief, gratuitous or otherwise, are extraordinarily small. Conditions which would formerly—and did formerly—throw millions on relief are now affecting only the merest fringe of the population.

5. *Price Statistics.*—Knowing the detailed procedure by which these are collected, one does not incline to attach very much importance to them. Traders in India usually disregard them, and rely solely upon their own sources of information. I have, however, recently revised my opinion as to this matter. Despite the obvious defects in the machinery available, or utilised in practice, for getting at the fundamental facts, it is important to remember that the tahsil underling upon whom the work in practice devolves has a knowledge of current prices which prevent him from going very far wrong, though neither his knowledge nor the degree of control which is in fact exercised over him, is sufficient to enable the statistics collected to reflect local conditions with satisfactory accuracy. Everyone in India is in touch with current prices for staple articles to an extent which is unknown in England, and this must assist materially in keeping the records reasonably accurate. When traders were pressed on this point, it was discovered that their main objection was, not that the recorded prices were seriously inaccurate, but that they were useless for commercial purposes because they were not available until the need for them had passed, and because they did not get down close enough to commercially identifiable qualities. When Director of Civil Supplies I had personal experience of these difficulties, and, though I found the price statistics reasonably accurate and reasonably consistent, they were out of date before I could get them. For comparative purposes, and especially for comparative purposes over a fairly long period of time, I think the published price statistics may be taken as sufficiently accurate.

6. *Wage Statistics.*—These are admittedly very defective; and while they may have a considerable measure of validity for broad general comparisons over long periods of time, any conclusions based upon them must be accepted with caution.

7. *Circulation of Notes and Discount thereon.*—Currency notes circulate to a very small extent in the rural areas; the capillaries of the note system usually stop before they get there. I have very seldom seen notes of any kind in villages off the line of rail in Kheri. I have, for example, gone through the cash boxes of hundreds of small traders—chiefly liquor sellers, opium and drug vendors, and small haberdashery retailers—without remembering a single case in which I found notes. Rents are paid in rupees, not in notes. Even in small towns, on the line of rail, domestic servants dislike being paid in notes. In the trading centres in the districts notes are taken more or less freely. Inquiries made in February 1918 at Lakhimpore (population about 13,000, on the rail, important grain export station) gave the following results as to the discount charged. (I am writing from memory, but think the facts are correctly reproduced):—

One-rupee Notes.—Discount one pice, had been two pice, and was said to have reached an anna in some cases.

Ten-rupee Notes.—Discount four annas.

Fifty- and 100-*rupee Notes.*—Discount never exceeded eight annas. The holders of 50- and 100-rupee notes of course knew what to do with them, and there was always a demand for remittance purposes. While at Cawnpore, in July 1918, the European agent of one of the large grain-purchasing firms told me that his experience, for that season, had been that the use of notes had involved an additional cost on grain purchases of between 4 per cent. and 5 per cent. Indian traders there assured me that the discount on notes had never been appreciable, but for purchases in the rural areas, even round Cawnpore, they insisted that rupees were necessary.

8. *Agricultural Servants and Labourers.*—Roughly 13 per cent. of the total population are agricultural servants or labourers, or dependent on their earnings. Agricultural servants are not a very important class; they usually receive a small cash wage, but they are fed and housed and enjoy many privileges, and many opportunities of augmenting their income licitly and otherwise. Agricultural labourers. in my experience, are never dependent solely upon cash wages; they usually have land sufficient to feed them in part at least, and they receive some portion of their total wages in kind. A plougher will get, say, four annas a day, and enough parched grain for a mid-day meal; a reaper will get so many sheaves out of each hundred cut and stacked; a labourer cutting thatching grass will be given so many bundles, and perhaps enough timber for the repair of his house, and so on. The tendency of recent years has been, however, towards fewer privileges and smaller payments in kind, and a larger cash wage. But there has been no tendency to cut the labourer entirely adrift from the land. He always has fields which he cultivates as a tenant, with or without some small privilege as regards the rate of rent.

He lives on the coarser food grains, seldom eats wheat or meat or fish, and clothes himself chiefly with country-made cloth. His connection with the exchange problem is rather remote; he is linked up with exchange and English prices chiefly through his metal cooking vessels, an occasional English-made garment for himself or his wife, and the price of the coarser grains which he chiefly uses, and of the wheat he occasionally eats, as determined to some extent by the competition between different crops based upon the export demand and prices. In an era of rising prices he has, in fact, prospered, his standard of living has risen, his wages have increased more rapidly than his cost of living, and he has shown himself remarkably resistant to famine conditions. A high rupee, within any reasonable limits likely to be considered, will not, I think, affect him adversely, nor would inconvertibility of any type likely to be regarded as within the sphere of practical politics. Most of the exchange problem will in any case pass over the head of the agricultural labourer.

9. *The Cultivator.*—Roughly 53 per cent. of the total population depend upon "ordinary cultivation." In the tracts with which I am acquainted the holdings run from about five acres to about 40 acres, the average probably being about six acres. Rent is paid either in cash or in kind, but rents in kind are rapidly disappearing. The cultivator is theoretically protected by various legislative devices against undue enhancements of rent, but economic conditions have rendered the Oudh rent law practically a dead letter. It does not follow that the rents are forced up to rack rents, but the tenants do not, in fact, enjoy that degree of protection which the legislature contemplated. There is the usual divergence between Indian theory and Indian practice. Cash rents, despite the failure of the law, lag much behind what the economic rents would be. The price obtained for the produce has risen rapidly, and the tenant has secured a reasonable share of the increase. He has undoubtedly prospered during the era of high prices which began about 1905. On balance, after feeding himself and his family on his produce, selling the surplus, meeting his customary expenses, and buying his requirements of imported goods at rising prices, but at prices which had not till recently risen as much as the price of the food grains he sold, he has had a surplus year by year which has been steadily getting larger. He has now a higher standard of living than he had before, wears a finer dhoti, travels more, lives in a better house, and enjoys more of the amenities of life.

It may assist in estimating the effects of exchange on the cultivator if some quantitative data are noted.

Quantity of grain exports, in proportion to the total estimated production of food grains, about 4 per cent. only in a favourable year.

Proportion of area under the following crops to total area sown with crops.

	Per cent.		Per cent.
Food area, all kinds	91	Under Juar	11
Fodder crop area	3	Sugar	1
Under wheat	11	Cotton	5
Under rice	35		

Of the wheat produced, during the period 11–12 to 15–16, roughly 13 per cent. was exported; of the rice, about 7 per cent.; of the sugar, practically none; of the linseed, about 77 per cent.; of the cotton, roughly 50 per cent. The exports of the coarser grains are relatively small; taking the figures for 15–16, for example, wheat and rice account for 82 per cent. of the total value of all grains and pulses exported,

These figures give some measure of quantitative precision to the statement that the cultivator is mainly concerned with the home market, and that the exportable surplus is very small, relative to the total production. But past history and economic theory alike seem to point to the conclusion that there is sufficient nexus to make internal prices in India depend upon "world" prices. Indian prices have, speaking generally, followed "world" prices, though the lag has hitherto been considerable, and though it is understood that the general price level in India is still considerably lower than in the United Kingdom, for example. It is comparatively easy, in the case of India, to cut the "world" connection for any particular crop, if necessity demands it.

The difficulty of making positive statements on such a subject will be appreciated; but I suggest that the present position might not unfairly be summarised somewhat as follows:—

(*a*) The cultivator has benefited greatly by the rise in prices till recently.

(*b*) But prices are now reaching a dangerously high level. Dangerous, because they will lead to serious internal disturbances if they continue to move upwards, or even to remain for long at their present level without rapid economic readjustments throughout the community. Dangerous, also, because their very high level will presumably render them unstable; and disadvantageous to the cultivator, because of his lack of knowledge. Readjustments, especially readjustments in the downward direction, demand knowledge and foresight and experience which he does not possess; and the strong probability is that he will suffer in the process.

(*c*) Further, the rise in the price of those imported goods in which he is chiefly interested has already embarrassed him seriously, and any measure which tended to lower rupee prices for English (or foreign) goods from their present very high level, or to provide some barrier against further increases, would be to his advantage, probably. A high rupee would tend to reduce the price of his produce; but in present conditions it seems doubtful whether the effect of this would in practice, and when taken in conjunction with other considerations, lead to any appreciable net decrease. India supplies food and raw materials which the world is urgently demanding; and Indian exports seem likely to command a high price for a long time to come. A high rupee might relieve the cultivator of some taxation, or prevent the necessity for increases in taxation; and it would give him cheaper foreign goods, if other conditions remained equal.

10. *Effect on the Cultivator of inconvertibility.*—Before the war, most district officers would, I think, have said that any measure involving inconvertibility would have most disastrous consequences. I doubt, however, whether the effect of any system which involved inconvertibility now, for transient periods, would have much effect. There have been serious practical restrictions upon the encashment of notes, and the supply and movement of coin, for some time; and nothing very much has happened. The premium upon coin has, it is believed, been gradually decreasing. Most of the friction has apparently been taken up in the trading centres, and in the smaller towns; and I believe—though I have no personal experience of this—that cultivators have in fact been accepting notes to an extent hitherto unheard of. It seems primarily a matter of psychology; and I think the cultivator could be brought, without much difficulty, to accept notes and use them, whether convertible or not, to the extent to which he required money for the payment of rent, and for his purchases. For hoarding, he must have rupees or gold.

11. *Use of Rupees for Ornaments, and Hoarding.*—The use of rupees for ornaments is rapidly decreasing. And there has been no increase in the use of silver ornaments, so far as the areas I am acquainted with are concerned, during recent years. Hoarding, on the other hand, is commonly said by Indians to be increasing; and I have been surprised at the amounts of coin accumulated by small cultivators, &c., in the comparatively few cases where one can acquire positive information. Definite data are usually obtainable in two ways only:—where a man dies intestate, and where a dacoity is committed. I remember instances where servants on Rs. 5 a month had accumulated and buried cash running to over Rs. 400; and in the course of a large number of dacoities the losses ran from about Rs. 200 upwards into thousands of rupees. These were quite small men.

12. *Machinery of the Export Trade.*—There is a marked tendency to eliminate middlemen. Formerly, a cultivator carted his wheat to the nearest large village, and sold it there; it would be sold by the purchaser to the nearest large town; and by the purchaser there to some trader who sold to Bombay or Calcutta for export, or to large wholesalers for internal trade. Now the cultivator usually sells direct to a sub-agency of some trader established at one of the more important towns of the district, this sub-agency being at the railway station. And the purchaser sells direct to Bombay, or Calcutta, or Delhi, &c., the goods being booked to destination from the station. The position is somewhat similar as regards the import trade; up-country vendors are getting more and more into direct touch with Manchester, for example, or with the large importing houses.

13. *Debasement of the Rupee.*—The political effects of any debasement of the rupee would, I think, be most serious. It seems very doubtful whether the present rupee could in fact be

replaced by a coin, similar in weight and appearance, but with a small silver content; but if the operation were possible, financially and otherwise, I am convinced that it would still be extremely undesirable. The population generally would regard it as a fraud, and would probably resent it most strongly; and it would react most prejudicially upon the reputation of the Government.

APPENDIX XX.

Heads of Evidence regarding the Economic and Political Effects of a Rise of Prices in India submitted by Sir James M. Douie, K.C.S.I.

1. Expenditure on food is a far larger item in the family budgets of most classes in India than in those of the corresponding classes in England. The second large item is clothing, but it is of very inferior importance. The prices worth considering are, therefore, those of food and clothes. During the war the high price of clothes was probably more felt than the dearness of food.

2. It is necessary to distinguish between a gradual rise of prices extending over a number of years due to causes of general, and possibly world-wide, operations, and sharp and sudden rises due to local and temporary causes lasting for one or two years. An abnormal calamity, such as the Great War, may produce the same effect as local and temporary causes, which are usually of a climatic nature.

3. Over large parts of India climatic conditions produce extreme fluctuations in the sown area and also in the yield of sown crops, and these fluctuations are reflected in great instability of food prices. The chief elements causing fluctuation are beyond human control, though extensions of irrigation afford partial and local remedies.

4. The export of agricultural products raises in a greater or less degree the price of food in India. Normally a rise in the exchange value of the rupee acts like a duty on export, and lowers prices in India by diminishing the amount of grain sent abroad. It also lowers the price of imported piece goods, and, so far as cloth manufactured in India competes with imported cloth, also lowers the price of the former. The rise in the value of the rupee ought therefore to have benefited the consumer in India. From a general point of view it is desirable to stabilise the value of the rupee at whatever figure may be thought appropriate as soon as possible.

5. Seventy-five per cent. of the people depend wholly or partly on agriculture for support. Broadly, this large section of the population may be divided into landowners, tenants, agricultural labourers, village artisans and menials paid for their services to the landowners by a fixed share of the crops. Land is held as a rule in very small parcels. There is much indebtedness to moneylenders, and the present owner or tenant often hands over his crop to the grain dealer, who is also his banker, in part liquidation of his account, and is fed by him till the next harvest. He is unable to deal direct with the agents of exporting firms, and so obtain the full benefit of high prices. To some extent he is liable to suffer from high prices of food, especially in very bad seasons, as if he were primarily a consumer and not a producer. Co-operative credit and co-operative sale and purchase are the appropriate remedy, and may in time solve the problem. Owing to the keen demand for labour and the shortage consequent on the ravages of plague, agricultural labourers receiving cash wages have been able to obtain advances quite commensurate with the normal rise of prices. What, as a class, they have to fear is temporary extreme dearness due to prolonged drought, and possibly accompanied by loss of employment.

6. Industrial employment may be divided into that provided by the factories and handicrafts. Factory hands are inefficient and wages are low, but like agricultural labourers, they had before the war obtained advances of wages more than covering the general rise of prices. The large number of workmen depending on handicrafts, especially the weavers, are in a very weak position economically, as they live normally on the margin of tolerable existence.

7. Lastly, there are the professional class, largely consisting of lawyers and Government servants, and the students, most of whom unfortunately aspire to become lawyers or Government servants. The legal profession is very overcrowded, and the emoluments earned, except in the case of a small proportion of those who follow it, are extraordinarily low. Owing to keen competition the general tendency has probably been for professional incomes to fall, while food and clothing have risen in price. This is the class from which political agitators spring.

8. People belonging to the classes referred to under heads 5 and 6, or say from 90 to 95 per cent. of the population are in that stage of mental development in which any misfortune is ascribed to the illwill of some malignant power, and power to them is represented by the

gods and the Government. Deep distrust of any government is an evil heritage from past misrule, which three quarters of a century of beneficent administration have not obliterated. It is quite compatible with belief in the benevolence of any individual representative of the Government. Plague, such people think, is disseminated by the Government to check over-population. If they suffered want owing to prolonged dearness of food and clothing, they would blame the Government for it. But I do not believe that, as a matter of fact, it is among people who are suffering in any way from want that agitators have found their tools. Such unrest as existed in the Punjab before I left India in 1912 was unconnected with poverty, and the best off among the peasantry were those who gave the most trouble.

9. But there is probably a pretty close connection between dearness of the necessaries of life and political discontent in the case of the educated and semi-educated class. Its economic theory would lead to protective duties on imported manufactured goods and restriction of exports of raw produce including food. The export trade is a bleeding of India for the benefit of England. Increased exports of jute and cotton merely mean that land which was devoted to the raising of foodstuffs has been diverted from its proper use with the result that food has become scarce and dear. It is easy to produce a reasonable answer to statements like the above, but replies embodied in Government resolutions do not reach most of the critics and do not convince those who read them. Messrs. Longmans & Co. recently published a large book on Indian Economics by an Indian professor of political economy in a Bengal College. The author argued that railway extensions in India injured the country by encouraging exports of food and ought to be stopped. The implication is that the fiscal policy of the Indian Government is framed in the interests of the English people and injures its Indian subjects, and that political disloyalty is equivalent to patriotism. I do not mean that the professor draws that conclusion, but belief in economic grievances among people who find existence difficult must foster political unrest.

10. The exact figure at which the rupee is valued is in the long run less important than stability in its valuation.

APPENDIX XXI.

Memorandum of Evidence by Mr. S. K. Sarma, B.A., B.L.

The Exchange Crisis.

I am obliged to the Government for inviting me to submit a memorandum to the Indian Currency and Exchange Committee on matters referred to them for their examination and report. Those matters embrace the wide field of Indian finance during the last quarter of a century, although the terms of reference would appear at first sight to be more restrictive and precise. If one were to take a too literal view of the scope of the Committee, it would seem that their object is to make provision to ensure a stable gold exchange standard rather than to secure a satisfactory monetary system, but that, I conceive, is not so. The terms of reference appear to have been subsequently annotated by the Secretary of State for India who, in answer to questions in the House of Commons, is reported to have said that there was no re-opening the policy of 1893, namely, the closing of the mints to the private coinage of silver, no coquetting with bimetallism, but that the Committee may endeavour to fix the price of silver in relation to gold. Such a commentary is an invitation to others to put their own interpretation on the terms of reference and might possibly induce the Committee to sift the entire mechanism of Indian exchange and finance with a view to reach a solution which may approximate to finality.

2. The necessity for a thorough sifting of the mechanism of exchange and the policy underlying the financial and currency system would be apparent by the fruitless efforts made in the past to rehabilitate it. In the short space of a quarter of a century, three Commissions have been summoned to deliberate, and this is the fourth Committee to advise the Government of India on the future of their currency policy—a thing which has rarely been witnessed in the history of any other civilised country, Asiatic or European. In 1892, the Herschell Committee inquired into the financial embarrassments of the Government of India said to have been caused by the falling exchange, but really by the enormous growth of civil and military expenditure. It recommended as a panacea, the closing of the mints to the private coinage of silver. In 1898, the Fowler Committee was appointed to take stock of the results of the experiments initiated as a consequence of the Report of the Herschell Committee. The Fowler Committee recommended the introduction of a gold standard with a possible gold currency and fixed the rate of exchange at 1*s.* 4*d.* a rupee. The measures adopted to give effect to its recommendations, the formation of the Gold Standard Reserve, the transfer of a portion of the Paper Currency Reserve to England, the increase of the cash balances both in India and England, and the unlimited sale of Council bills to satisfy the demand of the trade for remittance of funds, these

led to the appointment of the Chamberlain Commission, who voted against both a gold currency and a gold standard, and recommended the gold exchange standard. The ignominious failure of this new-fangled system has occasioned the appointment of this Committee.

3. In view of the fact that this Committee is called upon to submit proposals for ensuring a stable gold exchange standard, it would both be revelant and necessary to inquire into the preliminary question as to why it failed and if it is capable of being placed on a stable basis. Happily, the system was tried during a period of world-wide financial cataclysm when it was exposed to all the risks to which it might possibly be exposed. The attempts that were made, however, to buttress it cannot be repeated over again in normal times as they were tolerated and endured only as experimental measures at a time of grave national crisis.

4. The author or authors of the gold exchange standard have not attempted to define the exact scope of its operation, the lines and conditions on which it should be allowed to work, or the limitations subject to which alone it can be expected to succeed. The Chamberlain Commission would seem to have regarded it more as a result of the policy of "drift" than as the result of a consistent course of action. We cannot, therefore, regard the proposals they make in respect of the location and management of the Gold Standard Reserve and Paper Currency Reserve as part of the plan for setting the system at work. Its view may be summed up in its own words in paragraph 76 of its Report :—

> "Our view is that India neither demands nor requires gold coins to any considerable extent for purposes of circulation (as opposed to saving or hoarding), that the most generally suitable media of internal circulation in India are at present rupees and notes, and that the Government should, as opportunity may offer, encourage notes, while providing—and this is the cardinal feature of the whole system—absolute security for the convertibility into sterling of so much of the internal currency as may at any moment be required for the settlement of India's external obligations."

Rupees and, therefore, notes convertible into rupees are to be unlimited legal tender internally, and sufficient gold resources are to be maintained in order to meet external obligations. And London is the place where those resources can be conveniently maintained. As the term itself connotes, the currency system is not devised in order to enable the precious metals to perform their primary function of money, namely, a reliable standard of value and a proper medium of exchange, but to serve as a convenient tool to pay off external obligations.

5. As a medium of exchange the gold exchange standard has been a source of considerable embarrassment. It has brought into existence two media of fluctuating value, one for internal purposes and another for external purposes. That in itself would not be bad, if their relative value as fixed by statute could be satisfactorily maintained. There is no virtue in gold taking the place of silver as a medium of exchange internally and externally, or *vice versâ*, but if each is earmarked to operate in distinct fields, their relative value must be unalterably fixed. In pre-war days the exchange value of the rupee was dependent upon the maintenance of a steady flow of balance of trade in our favour. By the recovery of the value of silver during the war, it became profitable to export rupees. The exchange value of the rupee had, therefore, to be raised to a figure at which it would be unprofitable to export rupees. It was moved to 1*s.* 6*d.* and then to 1*s.* 8*d.* Those who are engaged in external trade are considerably embarrassed owing to the shifting rate of exchange. If, before 1893, it was falling exchange that disturbed the peace of the trade, it is now rising exchange that is agitating them.

6. But it is as a suitable standard of value that the gold exchange standard has hopelessly failed. The general course of prices is determined by two sets of circumstances, one set affecting the supply of the precious metals, or that metal which serves the purpose of money, and another set affecting the supply of commodities. Till the demonetisation of silver by the European countries, silver prices continued steady all the world over, and even after they continued steady in India. Gold prices, on the other hand, always tried to respond to the cost of production of that metal. The reason is not far to seek. The quantity of silver in circulation and in hoards is so great that the annual production cannot seriously affect its price, which is not so in the case of gold. Except when the mints disclose an alarming out-put of silver, the causes affecting its annual supply do not generally affect the course of prices and it is the supply and demand of commodities that determine their price. The gold exchange standard, on the other hand, has introduced a new complication, and Indian prices are not only subject to the supply and demand of commodities, but to the official manipulation of the volume of currency. When the mints were closed to the private coinage of silver, the Government ceased to coin rupees even of their own accord for a period of seven years and thus endeavoured to control the volume of currency. The object of such restriction was to appreciate the rupee by making it scarce. The annual coinage at that time was about seven crores, half of which was estimated to be melted down, and the other half put in circulation in order to meet the growing demand of trade. In seven years, about twenty crores would naturally have been added to the volume of currency. The cessation of coinage, therefore, resulted in appreciating the rupee. It was estimated that the rupee circulation in 1892 was about a hundred and twenty crores ; in 1899 it would have been a hundred and forty crores. Owing to the closing of the mints to the private coinage of silver and the cessation of coinage on Government

account, the function which a hundred and forty crores had to perform, had to be performed by a hundred and twenty crores. It need hardly be pointed out that such a restriction of coinage and control of the volume of currency must affect the general level of prices.

After 1900, however, a change came. The policy of masterly inactivity was followed by a policy of feverish activity. In principle the mints were closed to the coinage of silver, but the Government of India were forced to coin rupees all the same. The necessity for such a procedure will be stated below; but it is enough to point out here that the continued coinage of repees began seriously to affect the level of prices, and the matter came to be agitated in and outside the Imperial Legislative Council. The situation became so acute that in 1908, the Hon. Mr. Gokhale invited the attention of the Government to the paramount importance of appointing a committee to inquire into the whole question. The Hon. Member himself was inclined to regard the practical doubling of the volume of currency between 1898 and 1908—it was, according to Mr. Harrison, 130 crores in 1898 and 230 crores in 1908—as the principal cause for the inflation of prices. The arguments of the Hon. Mr. Gokhale were severely combated by the Hon. Mr. Baker, the then Finance Member. But Mr. K. L. Dutta was, however, deputed to inquire into the causes of the general level of prices in 1910 and he submitted his Report in 1914. The conclusions arrived at by Mr. Dutta were reviewed by me in "A Note on the Rise of Prices in India," published in the same year, and I do not propose to traverse the ground extensively covered in that pamphlet. But it is enough to point out here that statistics disclosed a striking sympathy between the volume of currency and general prices.

7. The charge of manipulating the volume of currency is disputed by every one who defends the present monetary system. The Royal Commission on Indian Finance and Currency repudiated the charge that the currency system in India must remain a "managed" system in the absence of an effective gold currency. It declared that it did not appear to make any essential difference between the power to import sovereigns at will and the power to have gold coined into sovereigns in India. "The only point of the criticism that India's "currency system is managed in a sense that is not true of the currency of the United "Kingdom," it said, "lies in the fact that the rupee is a token passing at a value above its "intrinsic value and at the same time is unlimited legal tender. It is true that it is not "practicable even to consider the limitation of the amount for which the rupee is the legal "tender. In this sense, therefore, the system must remain a managed one. But we demur "altogether to the idea that because it is to this extent a "managed" system it must be a bad "system. It is not, in fact, possible for the Government of India to manipulate the currency "for their own ends and they cannot add to the active circulation of the currency except "in response to public demands."

8. That the Indian currency system is not a "managed" or artificial one but a natural system providing for the expansion and contraction of the volume in response to the demands of trade is one of those myths which must have been exploded long ago but for the persistence with which it is iterated. The general principle underlying official coinage of rupees is stated in an India Office Memorandum accompanying the Despatch of the Secretary of State for India dated 18th February 1910. Proceeding upon the experience gained between 1900–1909, the India Office lay down that on the 1st October, when the period of rapid absorption commences, there should be maintained in both the Paper Currency Reserve and the Gold Standard Reserve combined, a stock of 24 crores and of 17½ crores on the 31st of March. If at any time the reserve falls below this, fresh coinage should be undertaken. The rupee stock in the Paper Currency Reserve and Gold Standard Reserve combined is the barometer which furnishes the reading for fresh coinage. The figures mentioned above represent 35 per cent. of gross note circulation on the 31st March, and the calculation is also made that the average annual absorption would be 14 crores of rupees, of which, allowance being made for new coinage of 7½ crores between October to March, 6½ crores must be held on 1st October in addition to what is held on the 31st March.

9. The India Office do not regard this method of calculation as a satisfactory one. They admit that the question is far from easy and that "whatever estimate may be formed and "used at any time as the basis of a practical decision regarding the level at which the stock of "rupees in the two reserves shall be kept, there must always be the possibility that subsequent "events will so shape themselves as to show that a different decision would have been more "beneficial." They add: "If a liberal view of the requirements of the two reserves is taken "and large amounts of silver are bought and coined, trade may immediately fall off and "exchange decline, rupees in the reserves may for a long period be practically useless and "the temporary loss of the sterling resources with which they were purchased may be a serious "misfortune. If, on the other hand, the more restricted view is acted on, and the stock of "rupees kept low, a sudden outburst of trade activity may expose the Government of India to "embarrassment in its attempt to cope with the demand for currency. This difficulty is one "which can never be avoided."

This is sufficient condemnation of the artificiality of the present system. It is not as though the Government of India coin rupees when the requirements of the trade compel them to do so, but that they have to anticipate their requirements in advance and make provision for the same. An over or under estimate will always cause them embarrassment.

10. The necessity for this coinage arises out of the monetary habits of the people, based mainly upon their economic condition, differing from what the Government lay down that they shall be. A gold standard based upon a gold currency was the ideal which the Government of India had tried to work at for over half a century; but the people show a persistent partiality for the use of the depreciated white metal. Soon after the establishment of the gold standard, the Government of India even forced gold upon the people, so confident were they of successfully establishing a gold standard based upon a gold currency. Sir Clinton Dawkins, the Finance Member, said in 1900 :—

> "A year ago it seemed that we should probably have to sit for a long while under the reproach of our critics, and put up with what has been termed an 'exchange standard.' It then appeared impossible that in twelve months we should be paying out gold to anybody who asked for it. We are doing so now. Whether we shall be able to continue to do so without check or interruption, whether now we have once started giving gold for rupees we may not have to suspend temporarily is not a matter about which a confident prediction can be made. But it would be reasonable to say that the auguries are not unfavourable for our being able to pursue the path on which we have entered. Our position in respect of gold is strong."

Lord Curzon was even more emphatic. With that exuberance of language in which he always delighted to clothe his prophecies, he declared that stability of exchange had assumed a "stereotyped form" and added :—

> "This great change had been introduced in defiance of the vaticinations of all the prophets of evil, and more especially of the particular prophecy that we could not get gold to come to India, that we could not keep it in our hands if we got it here, but that it would slip so quickly through our fingers that we should even have to borrow to maintain the necessary supply. As a matter of fact we are almost in the position of the mythological king, who prayed that all he touched might be turned into gold and was then rather painfully surprised when he found that his food had been converted into the same somewhat indigestible material. So much gold, indeed, have we got, that we are now giving gold for rupees as well as rupees for gold, *i.e.*, we are really in the enjoyment of complete convertibility—a state of affairs which would have been derided as impossible by the experts a year ago."

Lord Curzon did not remain long enough in India to see the myth of Midas explode away even as the mist before the morning sun and the "stereotyped form" which the stability of exchange had assumed only remained a pious wish. The slump of gold was but a nine days' wonder and it was not long before the Government of India were forced to start on a career of feverish coinage of rupees.

11. Nor is this inexplicable. In the first place when two metals are unlimited legal tender, the more precious metal will invariably be driven out of circulation. Some fanciful and imaginary estimates are given about the actual circulation of gold by critics of a certain type, but the heavy and persistent demand for rupees even when there is a heavy accumulation of gold in the Paper Currency Reserve shows that as a medium of internal circulation gold can never displace silver. It is only stating Gresham's Law in different words. The heavy importation of gold serves other purposes than add to the volume of currency.

In the second place the economic condition of the people forbids the circulation of gold to any large extent. The transactions in India are carried on such a small scale and poor values that the use of gold is not seriously needed. Sir Robert Giffen once estimated that the possible circulation of gold may not be more than three or four millions. From the income-tax returns for the current year it would seem that the total number of people whose income is estimated to be Rs. 1,000 a year is 3,81,000 and of these 2,37,000 are petty assessees whose income is less than Rs. 2,000 a year. Those who are estimated to earn more than Rs. 2,000 a year are thus less than 15,000. Rs. 2,000 a year will give only about 11 pounds sterling per month. If, among a population of about three hundred and fifty millions, only less than one sixth of a million earn about eleven pounds a month, it goes without saying that the sovereign can but circulate only among a very insignificant class of the community. The economic condition of the country is a very serious handicap to the more active circulation of gold and it goes without saying that till there is a perceptible increase in the earning capacity of the large mass of the population and their standard of living is raised to a considerable extent, the transactions calling for the circulation of such a high valued coin as the sovereign must be extremely limited.

12. Silver being, then, the only medium of exchange which nature has provided for communities so economically placed as the Indian, the question is whether the claim of the gold exchange standard to provide an automatic currency is sustainable. It is rather late in the day to discuss the merits of an automatic currency in preference to a State-managed one, and the warmth with which the charge of artificiality made against the Indian system is repudiated is itself a striking proof of the superiority of an automatic currency. Sir Clinton Dawkins, who could not stand the reproach of the Indian Currency system being termed an exchange standard, affected to shudder if it should be left to the Government to determine,

with nothing to guide it, whether the currency was or was not redundant, and to take action accordingly. "It would be more than difficult," he said, "to steer a middle course between "the Scylla of stringency with lowering of prices and the Charybdis of dilution of the "currency with depression of exchange. But henceforward the Government will be guided "by the trade demand of our silver-circulating medium, for our notes printed on silver as we "may really regard our rupees as being, the trade demand expressing itself in the presentation "of gold. As long as the Government refrains from coining rupees, except upon the demand "of trade, there can be no dilution of the currency. There can be no contraction as long as "trade, if it needs rupees, has only to tender a sovereign to obtain silver coin in exchange, "coin already in our balances or new silver coins if the balances will not suffice."

Eight years later Sir Edward Baker, the Finance Member, reminding the Council of the above dictum of Sir Clinton Dawkins, which he claimed to have faithfully followed, warmly repudiated the suggestion of diluting the currency by any action of theirs. He defended the naturalness of the system in the following words:—

> "In a country with an automatic currency, when the circulation is temporarily redundant, the surplus flows away under the operations of trade in the form of exports of coin. That outlet is not available in India, because rupees can only be exported at their bullion value, and the loss of doing this would be prohibitive. But we have provided another outlet for the excess. This may be applied in two ways, *viz.*, either we may give gold in exchange for rupees, in which case the gold will be available for export, or, when this is inconvenient or impracticable, we may sell Bills on London . . . . Each of these methods has the same effect on the currency. They draw off the surplus rupees, and withdraw them from the effective circulation until the demand once more revives and the temporary redundancy has ceased. The machinery which enables us to apply these remedies consists of the gold in our currency reserves in India and London, and the gold securities and gold in the Gold Standard Reserve. These two resources combined now stand at over 20 millions sterling, or 30 crores of rupees, and if applied to this purpose would enable us on occasion to contract the circulation by about one sixth of its total amount."

13. I have already referred to the principle underlying new coinage of rupees. The charge against the gold exchange standard is not that it does not provide adequate currency when the trade require it, but that there is no provision for contraction when the slackness of season comes on. In fact, the Government of India have never declined to give rupees for gold tendered to them. The tender of gold is met by the issue of currency notes redeemable in silver, and when the notes are returned to the treasuries payment is made for them in rupees. It is optional to pay for them in gold also, but the Government of India are not bound to do so. Thus is put into circulation a large mass of token coinage which is also unlimited legal tender, the silver in the Paper Currency Reserve and the Gold Standard Reserve combined furnishing the reading for putting the mints at work.

14. The chief defect of this policy lies in the fact that once a rupee it always remains a rupee. Sir Edward Baker referred to but one method of contraction open to an automatic currency, namely, the withdrawal of currency for purposes of export. But there is another method which is not less significant, and that is the melting down of the currency for arts and for the use of industries. It was the most potent method of contraction in the days when India had the benefit of a silver standard. Sir James Westland estimated that fifty per cent. of the annual coinage was so melted down. The annual coinage did not therefore supply a reliable and proper measure of the actual requirements of the country. The method of contraction is not open to us now, and the only way lies in giving gold for export, or, which is the same thing, selling Reverse bills on London. Sir Edward Baker estimated that in his time it was possible to contract the circulation by a sixth.

15. I submit that there is only a theoretical possibility of contraction, and neither the export of gold nor the sale of Reverse bills can adequately draw off rupees that are once put into circulation. The sale of Reverse bills on London and the release of gold in India are not as common as the forced circulation of rupees. They are conditional upon the exchange falling below 1*s.* 4*d.*, and even then the mercantile community have to raise a hue and cry. Before the war it was only on two occasions that the Government of India took these extraordinary steps; once in 1902, when the Government of India found that they could not, owing to the conditions prevailing at that date, sell their drafts at what they considered a suitable rate, they drew on their stock of gold and remitted 500,000*l.* to England to meet temporarily the requirements of the Secretary of State. Again, when, owing to the combined effects of the American crisis and the failure of the Indian monsoon, the exchange fell in 1907, the Government of India sold Reverse bills to the value of 8,058,000*l.* They declined to give gold for export, and the following explanation was given by Sir Edward Baker, the Financial Member, in his Financial Statement for 1908–09:—

> "The theoretical arguments in favour of a liberal issue of gold as an antidote to a fall in exchange were freely admitted. But it was felt very strongly that the depression was not due exclusively to the contraction of exports. The demand for gold was made

in part in the interest of our own trade, but it was also due in great measure to the American crisis, and the latter factor was clearly one that had to be seriously reckoned with. Our own interests could effectively be protected by the stoppage of Council drawings, and this course the Secretary of State had already adopted. Moreover, our whole supply of gold was only about 3,750,000*l.*, of which only some two millions was at Bombay and Calcutta, and this was already being drawn off at the rate of about 400,000*l.* a month for internal consumption. Had we complied with the demand for issues without limit, the whole available supply might have been drawn off in a few weeks, and we should then have been forced to discontinue them, with the possible result of precipitating a panic."

Again, when the war broke out there was considerable demand for the remittance of money to England, and between August 1914 and January 1915, Reverse bills to the value of 8,750,000*l.* were sold.

16. The justification for the sale of Reverse bills or the release of gold is that the Government is bound in a way to prevent the fall of exchange, and apart from the suspension of the Council drawings, these are found to be effective measures for doing so. They have not for their object the contraction of the currency, though to a limited extent such contraction results from adopting either of these measures. And from the rare occasions when these measures are adopted it will be seen that they cannot be substituted for the natural method of melting down the rupee which was in vogue with a free and open mint. Since the opening of the war the additional coinage amounted roughly to 120 crores, a sum which was estimated to be in circulation in 1893. If, during the same period, Reverse bills to the value of only less ten millions were sold, its inadequacy to contract the volume of currency will be patent.

17. The net addition to the volume of currency, however, is greater than the 120 crores coined and put into circulation between April 1915 and March 1919. The effective circulation of currency notes was under 60 crores before the war and it had been increased during the same period to 150 crores. Thus there has been added to the volume of currency 210 crores in the four years ending 1st March 1919, a sum which is approximately equivalent to the volume of currency before the war. Our currency is thus practically doubled.

18. I have already referred to the defence of this policy by the Chamberlain Commission, who warmly protested that it is not possible for the Government of India to manipulate the currency for their own ends and that they cannot add to its active circulation except in response to public demands. But Sir James Meston pleaded earnestly in his Financial Statement for the current year (1919–1920) for the withdrawal of a portion at least of the emergency issues of paper. It was a tacit admission on his part that the printing press was a trifle freely used to supply "money" not to meet the demands of trade but the exigencies of war. Graphic accounts of those exigencies and how they were met are given in their Financial Statements by Sir William Meyer and Sir James Meston.

19. The possibility of this expansion of printed paper was due to a series of Acts commencing with Act II. of 1898, which enabled the Secretary of State to set aside the proceeds of the sales of Council bills at the Bank of England in gold as part of the Indian Paper Currency Reserve and the Government of India to issue notes against the gold so set aside wherewith to meet the Secretary of State's drafts without touching the Treasury balances. The balances of the Government of India were then at a low level and there was a difficulty of meeting from them the drafts of the Secretary of State for which there was a strong demand. Money in India was exceptionally dear, the bank rates in Calcutta and Bombay standing at 11 and 12 per cent. respectively. The exchange had risen to gold point. It was to meet this difficulty that the Act was passed. It was to be in force for six months and "no longer" and "until the Secretary of State shall transmit the same, or what he shall "determine to be equivalent to the same, in gold coin or gold bullion, to India, or until the "Government of India shall appropriate and set apart, in India, as a part of the currency "reserve under section 19, an amount of coin of the Government of India equal in value to "such notes." But the utility of the measure was discovered early enough and it was extended to 2½ years by Act VIII. of 1898, and for a further period of two years by Act VIII. of 1900, which empowered the Secretary of State to expend the gold held by him on the purchase of silver bullion and to transmit such bullion purchased under it to be held as security for currency notes until rupees were coined from it. By Act III. of 1905 and by Act X. of 1910 which repealed it, coin and bullion in transit between England and India formed part of Paper Currency Reserve. Act XIX. of 1917 enabled the Government to treat as part of the Reserve gold coin or bullion held on behalf of the Governor-General-in-Council by or under the control of the Government of any part of His Majesty's Dominions for coinage or such other temporary purpose.

Reference must also be made to Act XXII. of 1899, which rendered gold coins legal tender "in payment or on account at the rate of fifteen rupees for one sovereign."

The combined effect of Act XXII. of 1899 and the series of Acts commencing with Act II. of 1898, is that the Government of India can issue notes in India redeemable by silver to whatever amount the Secretary of State for India can sell drafts after receiving therefore gold coins or bullion in any part of British Dominions.

20. Before the war the Secretary of State had conceived himself to be under some obligation to the trade to sell Councils to any extent they wanted. The considerations governing his conduct are stated by the Chamberlain Commission to be the following:—

> "The transfer to London from the Government of India's balances of some 20,000,000*l.* annually for the Home charges on revenue account and of 6,000,000*l.* or more to meet capital expenditure remains the chief function of the sales of Council drafts, but if the expense and waste involved in the shipment of sovereigns from India to London on Government account is to be avoided, it is necessary for the Secretary of State to sell sufficient drafts, not merely to meet his own requirements on revenue and capital account, but also to satisfy the demands of trade up to such an amount as will enable the balance of trade in India's favour over and above the amounts of the Home charges on revenue and capital account to be settled without the export to India on private account of more gold than is actually required in India for absorption by the public."

The shipment on Government account which the Secretary of State is anxious to avoid is for the purpose of purchasing silver, but I do not know if there is any virtue in purchasing it from a London firm in preference to an Indian firm, or if the financial wisdom of the Secretary of State's advisers is necessarily superior to what is available to the Governor-General-in-Council. But how is the Secretary of State to anticipate the possible demand of sovereigns for consumption? At best the demand has been fitful. In 1902–03 we imported 9,560,000*l.* The next year it expanded to 12,920,000*l.* In the next two years it dropped to 9,900,000*l.* and 7,500,000*l.* respectively. It swelled again to 13,150,000*l.* in 1906–07 only to be followed by a further and sudden fall to 4,740,000*l.* and 3,930,000*l.* in the next two years. Since then there has been an upward movement. In 1909–10 it rose to 16,210,000*l.*, in 1910–11 to 20,470,000*l.*, and 1911–12 to 29,910,000*l.* In nine years the variation has been between 3,930,000*l.* and 29,910,000*l.*; and how is the Secretary of State for India to satisfy "the demand of trade up to such an amount as will enable the balance of trade in India's "favour over and above the Home charges on revenue and capital account to be settled "without the export to India on private account of more gold than is actually required in "India for absorption by the public," when such absorption cannot possibly be estimated?

21. On the other hand, it may be maintained that the sale of Councils by the Secretary of State in excess of his requirements, creates an export trade which would otherwise show shrinkage. The Chamberlain Commission would seem to be of opinion that a fall in the sale of the Secretary of State's drafts will not be accompanied by a corresponding fall in the exports, but that gold would be imported into India in excess of public demands. Is money so abundant in London that ten or fifteen millions could be withdrawn during the busy season for the purpose of financing Indian trade without affecting the discount rate? If such a withdrawal is possible, how is it that during the busy season the bank rate rises sometimes to eight per cent. and money does not flow in, and the trade clamour for advances being made to them from the Treasury balances or the Paper Currency Reserve?

By selling drafts to the extent of ten or twelve millions over and above his requirements the Secretary of State safe-guards the gold position of England, assuming that a certain portion would otherwise be exported to India. He receives the gold which he either invests, thereby easing the money market in London, or uses it in purchasing silver, thereby supporting those engaged in that trade. That is so far on the other side of Aden. On this side of Aden, he releases fifteen or twenty crores from the reserves and provides the trade with so much additional capital. To have fifteen crores of loan funds during the busy season is no small advantage to the trade, and it is extremely unkind of the mercantile community in India not to recognise the very great service which the Secretary of State is thereby rendering them.

22. The effect of the sales of Councils on the volume of currency is instantaneous. Immediately the bills are presented in India, the Government issue currency notes to the holders thereof. These notes go out into circulation, but they do not spread themselves out into the interior. At the earliest opportunity they are presented for encashment and the Government of India have to be ready with silver coinage. The bills are paid either from the Treasury balances or from one of the two Reserves. As has already been pointed out, the rupees in the Gold Standard Reserve and Paper Currency Reserve should not fall below 24 crores on the 1st October. If they do, coinage is undertaken. And in order not to depend too much on the Reserves, the policy of rigid economy in public finance is given up; the cash balances are allowed to swell and taxation is kept up at a high pitch. The budget estimates are so framed as not to shock public opinion, but the actuals are always heavy surpluses available to, and availed of by, the trade.

23. The policy pursued in the pre-war days was only adopted in an exaggerated form when the war broke out. Unlike in the United Kingdom, where the Currency and Bank Notes Act had to be passed in 1914, whereby the Treasury undertook to issue currency notes of the value of 1*l.* and 10*s.* as legal tender throughout the United Kingdom, legislative provision was already in existence whereby the printing press could be put to work. In the early years of the war, owing to the general dislocation of the trade and finance, Reverse bills

had to be sold on London to the value of 8,750,000*l.* to maintain the exchange and the tide did not set in till the autumn of 1915. Mainly as a result of the war conditions a considerable demand then made itself felt for Indian produce and the export trade began to show a marked and growing revival. In 1915–16 the Secretary of State sold bills to the value of 20,000,000*l.* which was raised to 33,000,000*l.* in 1916–17 and 35,000,000*l.* in 1917–18. It came to 20,000,000*l.* in 1918–19. Thus in four years he had sold bills to the value of 108,000,000*l.*, and allowing for the sale of Reverse bills in 1918–19 of 4,800,000*l.*, there was a net sale of 103,000,000*l.* These sales were effected solely for the purpose of supporting trade. During the same period the Government of India had to find money for war expenditure incurred by them on behalf of the Home Government. The expenditure was, of course, recoverable by the Secretary of State, and if his object in selling Councils was only to pay himself the amount due from the Indian Government on account of the Home charges, the sales need not have been made at all. The Government of India had incurred expenditure on behalf of the Home Government to the extent of 200,000,000*l.* If the Secretary of State cared, he might have set off a portion received from the Home Government for his expenses. This he failed to do, and in the years 1916–18 he sold more than his requirements. The Government of India were thus forced to find 103,000,000*l.* for the Secretary of State's drafts and 200,000,000*l.* for war expenditure. Not only this. There was further a transfer on account of the Treasury and the two Reserves of a sum of about 76,000,000*l.* on the 31st March 1919 over and above the sum on 31st March 1915. This was invested in Treasury Bills. Or in other words, legal tender money was created in India by the issue of currency notes, credit being taken in England in the shape of Home Treasury Bills. Altogether, the Government of India had to find the equivalent of about 380,000,000*l.*

24. For this the Government of India had raised in War Loans a sum of 68,000,000*l.* The balance had to be raised from revenue proper, from the two Reserves in India and by means of fresh coinage of rupees or issue of currency notes. No wonder that "emergency issues" of notes now overstep the limit of 1914 by a 100 crores and the rupee circulation by a 120 crores.

25. The difficulties of the Government of India are stated in the concluding portion of his Financial Statement by Sir James Meston to be three in number, *firstly*, the growing demand for silver; *secondly*, the contraction of the paper currency; and *thirdly*, the redemption of temporary war obligations. With the last, this Committee is not concerned; and it would surely be beyond the scope of this inquiry to discuss measures to meet the difficulty. The first two are only different phases of the same problem, namely, how to pay the notes when presented for encashment? "If the absorption of rupees were to continue at the rate of the past three years," wrote Sir James Meston, "the time must ultimately come when it would "be physically impossible to purchase sufficient silver to replace them, and in that event our "internal currency policy would have to be fundamentally recast. Or, if by superhuman "efforts and by outbidding all other purchasers, we were lucky enough to secure the requisite "amount of silver, it is more than likely that our operations would force up the price to some "giddy height and would throw the whole of our exchange policy into the melting pot. War "and its rumours revived in a highly exaggerated form the ancient Indian custom of hoarding "metallic currency which we had hoped we were slowly overcoming; and until recovery in "this respect sets on, our difficulties must continue acute."

26. From the giddy heights of Simla the privileged Anglo-Indian can afford to sneer at the absurd Indian custom of hoarding the precious metals; and when it causes annoyance to the comfort of his official life no words can be too strong to condemn the insanity of it. But social habits, prejudices, and idiosyncrasies are among the most deep-rooted in human institutions and they cannot be altered to suit the conveniences of even an irate Finance Member. From time immemorial, long before the wealth of the Indies attracted the devastating hordes of the West, the Indian has been using the gold *fanam* as the standard of value and every other metal, lead, copper, bronze, served only the purpose of subsidiary coinage. Silver was seldom used as medium of exchange; as a standard of value never. It was the invasion of the Muhammadan that brought that metal into prominence and the English have continued it. Paper was never used as "money" and the Indian has never been accustomed to it. The most debased form of currency, that introduced by Mahomed-Bin-Tughlak, was something more valuable than paper, leather.

Nor is the habit surprising when regard is had to the fact that precious metals used as ornaments were among the absolute properties of women. Every Hindu parent who loved his girl and husband who loved his wife invested her with ornaments of some value in order that the distant reversioner or collateral may not lay violent hands upon that form of property which is exclusively hers. The few ornaments with which the Indian woman adorns her person serve an economic purpose. Sentiment and religion alike forbid the violation of the properties of women, and every lady of respectability considers it her duty to keep an economic reserve for her in the shape of jewels and ornaments. In times of scarcity they serve the additional purpose of being immediately converted into cash, a thing which cannot be said of paper, which avaricious Governments are sometimes inclined to render inconvertible.

27. But the hoarding of precious metals does not seem to be a peculiarly Indian vice; they are absorbed by the European people with no less greed and avidity. For a people who

form only 19 per cent. of the population of the world, the consumption of less than 20 per cent. of the world's production of gold does not seem to be a vicious habit. And yet that was the consumption of India in the five years before the war. Between the years 1890–1910 the United Kingdom, the United States of America, Germany, France, Italy, and India absorbed among them 899,100,000*l.* of which India accounted for 126,600,000*l.* It may be interesting to note that whereas the net addition to the banking reserves of the five European countries came to 306,610,000*l.* during the same period, their absorption for "other purposes" reached the high figure of 465,839,000*l.* In other words, the most civilised European powers who have no "insane" desire for the precious metals, are in the habit of absorbing for other purposes 50 per cent. more than they do for bank reserves. Their total consumption during the same period came to 672,500,000*l.* out of the world production of 1,233,000,000*l.* If 21 years' experience of popular tastes goes for anything, these figures do not place the European people in a better light than the Indian whose passion for hoarding is responsible for periodical diatribes from the officialdom at Simla.

The only change perceptible in the habits of the people, however, is that since 1898 they have begun to absorb gold to a relatively greater extent than silver, whose absorption has more or less remained steady. The reason for this preference is undoubtedly the higher gold prices Indian commodities secure and the more easy availability of gold at a price which in rupee value is cheaper than it was before the introduction of the gold standard. Since the opening of the war the importation of gold has practically stopped owing to the unwillingness of Europe to part with its gold, and people have begun to hoard the only other metal which is available, the silver rupee.

28. From the foregoing observations it would be evident that the problem of silver will be a self-imposed one if the Government of India do not care to remove the restriction on the free importation of gold. Indeed, it is not clear in whose interests the prohibition is maintained. The balance of trade in India's favour has been in the past 20 years paid for mainly in gold, and if European nations are convinced of the economic value of Indian products they must be prepared to pay for them. The excess of exports of merchandise over imports during the five years 1914–19 was 254,000,000*l.* The net importation of gold in return for this was only 26,000,000*l.*, of which 12,000,000*l.* was acquired by Government. In the preceding five years the excess of exports came to about the same amount, and this was paid for by the importation of 96,000,000*l.* of gold. There is no reason, therefore, why in the future a considerable portion of the balance of trade should not be paid for by gold as in the pre-war days. It is the restriction on the private imports of gold that accounts to a certain extent for the "insane" demand for rupees which, as Sir James Meston piteously complains, "disappears from circulation almost as soon as they are minted."

29. The free importation of gold will have the further result of drawing out a considerable portion of the recent rupee coinage, which is clearly in excess of the normal demands of the country.

30. Even with the free importation of gold the silver difficulty cannot be altogether obliterated. The Secretary of State may religiously follow the directions of the Chamberlain Commission in selling Council bills, but the demand for rupee coinage will still continue. The extent of such coinage cannot be estimated at present; it will depend upon the balance of trade in our favour, the conditions of Indian export and import trade. And so long as the Government of India have not retained with them the option of redeeming notes in gold or in silver, but are bound to pay for them in rupees only, they cannot but enter the silver market and raise its price by sheer competition. India is one of the largest consumers of silver, and her recent coinage of rupees was effected not only by the consumption of the entire output from the mines, but also by indenting upon the existing stock. The amendment of the Paper Currency Act, therefore, enabling the Government of India to pay for notes in rupees or in gold at their option seems to be urgently called for if the general scramble for the white metal is to be avoided. And they must issue gold in exchange for the currency notes in circulation freely and unreservedly.

31. Whence is to be obtained the enormous amount of gold that will be necessary to redeem the emergency issue of notes? I submit that we have transferred to the United Kingdom at present a sum of over 106,000,000*l.*, a considerable portion of which is invested in Treasury Bills, of which over 76,000,000*l.* has been transferred during the war. The Gold Standard Reserve has contributed nearly 36,000,000*l.* and the Paper Currency Reserve another 55,000,000*l.*, besides a special reserve of 7,000,000*l.* roughly, on the 31st March 1919. Leaving the Treasury balances of 8,750;000*l.*, there is a reserve of 98,000,000*l.* invested in securities or short loans. The investment on behalf of the Paper Currency Reserve has been made by a series of ordinances issued by the Governor-General-in-Council. Nobody has quarrelled with these transfers while the war lasted; in fact, our keenest regret has been that we could not do more to mark our sense of appreciation and gratitude for all that the United Kingdom has patiently suffered and wrought for the cause of humanity and civilisation. But now that the war is over, Great Britain must try to return to us what we have lent her. The 100,000,000*l.* or so that stands to our credit must be returned to us, and it will be the fund which will enable the Government of India to redeem the notes. In so far as the emergency issue of

notes has been rendered possible by the investment of sovereigns received on behalf of the Paper Currency Reserve the return of the gold so invested will only be a natural way of obtaining the fund necessary to redeem the war notes. The 55,000,000*l.* invested in Paper Currency Reserve alone would enable us to withdraw over eighty-two crores of currency notes.

32. With regard to the Gold Standard Reserve it may be heretical to pronounce an opinion, contradictory to what is so authoritatively held by the Chamberlain Commission, that its location must be in London, because London is the clearing-house of the world, and that if kept in India it would have to be shipped to London to be used there when necessity arose. Looking back at the history of the Gold Standard Reserve, which has passed through vicissitudes of tragic diversity, it will be seen that during the last twenty years it was only twice that Reverse bills had to be sold on London, once during the American crisis and again soon after the outbreak of war. On both these occasions the sum so released in England came to less than nine million sterling. Why should the Gold Standard Reserve of some thirty millions be kept in London for the purpose of meeting a possible decennial demand of nine millions? What difference would it make in the exchange position between the Secretary of State for India raising a nine million loan and selling nine million of our securities? Supposing that Gold Exchange Standard is our destiny, would the cost of shipping to England nine millions once in ten years be so great as to override the advantages of keeping about thirty million solid gold in India? The sense of national pride that its possession will give us will alone compensate for the loss of freight. There is no use ignoring the heart-burning caused in India at the investment of a major portion of this Reserve in securities among a rich population who can certainly manage without this loan, while the trade in India suffer at times from a bank-rate of eight per cent., to whom two or even three crores during the busy season would be a welcome shower.

But these considerations apart, the necessity for maintaining a Gold Standard Reserve of 36,000,000*l.* in England, with the exchange standing at 1*s.* 10*d.* is not apparent. The object of the reserve is to maintain the parity of exchange at 1*s.* 4*d.* It was, of course, never contemplated by the officials at Simla that silver price would recover and drive the sixteen-penny rupee out. But now that silver has become more valuable the difficulty anticipated cannot arise, and if it could be used for the purpose of relieving another difficulty, there is no reason why it should not be used for that purpose. The reasons given by the Chamberlain Commission for maintaining the Gold Standard Reserve in London have become out of date, and there is every reason, political and economic, for transferring the reserve to India and applying the gold freely for encashing rupees, should the demand arise even after the liberation of the 55,000,000*l.* of the Paper Currency Reserve for that purpose.

33. There is one other step which the Government of India might take—they might have taken it even earlier—and that is to make every possible effort to place the sterling debt of India on a rupee basis. Fewer rupees would have to be given in purchasing the stock with 1*s.* 10*d.* a rupee than with 1*s.* 4*d.*, and the national gain would be sixpence for every pound sterling of debt so converted. It would release a considerable amount of rupees from the hoards, and thereby throw into the market a decent quantity of silver which will have the effect of relieving the pressure on the silver market. It may not be possible to predict the quantity of stock which might be consumed by the investing public, and in these matters experience can be the only safe guide. Nor would it be wise to make any sanguine estimate from the amount of the War Loans that have been taken up. The success of War Loan operations is entirely due to the vigilant co-operation of both officials and non-officials inspired by the patriotic feeling of supporting the Empire in moments of dire necessity. The subscriptions amounted to less than seventy millions sterling. But spread over a few years the prediction may be ventured that a considerable portion of the sterling debt will be taken by the people, among whom there is growing up of late a spirit of economic independence, of resolute desire to work out their national salvation by their own efforts. The conversion of the sterling debt should have taken place long ago, but now that the exchange stands high, delay would certainly be unwise. The experiment would serve two purposes; it would reduce national debt and at the same time release a considerable quantity of silver, which is of no small advantage to the Government just now.

34. As a necessary corollary to these measures is the restriction of the sale of Councils by the Secretary of State for India. The suspension of his sales may be one of the ways of meeting the silver difficulty, of transferring the emergency investment in British Treasury Bills. The trade may then be compelled to import gold to pay for the exports or restrict their exports or cheapen the imports. Any one of these means will have to be resorted to by them and the Indian producer will not be sorry for it. The suspension or even the restriction of the sales of Councils may not of course be agreeable to those engaged in developing the sea-borne trade of India, but so far as the large mass of the population are concerned, it is not to them a matter of vital import. The scope for the development of internal trade is far greater than is generally recognised, and if Europe, anxious to exploit the resources of this country and consume for her manufactures the raw products available in abundance here, is not prepared to pay the price demanded for them in gold or in cheapened imports, she must

abandon hopes of Indian supply and seek for it in fresh fields and pastures new. A restricted export may possibly be the only result of the abstinence of the Secretary of State, and the commodities so liberated are sure to find an ever-growing internal market. I do not apprehend that they will be a glut or that the country will lose immensely in the profit that can be obtained elsewhere.

35. I am aware that this proposal will be hailed with general dissatisfaction by the mercantile community in India as involving artificial interferance with the due course of trade, but I do not see how the Secretary of State is committed to help them with funds for the exploitation of this country. All he is obliged to do is not to impede the free development of the commerce of this Dependency with the outside world by the enforcement of stringent and artificial currency laws. It is never part of his duty to stimulate international trade by such means as the sale of Councils over and above his own requirements. It is a wholesome principle of trade that those who are engaged in it must find their own resources for conducting it and not be spoon-fed by doles coming out of official favours. If in withdrawing funds from India for his own requirements, the Secretary of State liberates a certain sum from the Treasury, it is an advantage which the trade derive incidentally to official operations, but that by no means gives them the right to expect financial help as a settled policy of the State.

36. In order to meet the silver difficulty, the solution that would naturally suggest itself would be the relief of the market from the incubus of the Secretary of State's competition; but certain suggestions are made in India which are not likely to ease the situation to an appreciable extent. It is suggested that the silver in the rupee may be reduced. At present the rupee contains 180 grains, and it is suggested that coins of 100 grains may be issued. It is also further suggested that bronze pieces may be issued of the value of eight annas. The suggestion is apparently made in the belief that by reducing the weight of silver in the rupee, the light-weighted coin may be made really a token coin. The hundred grain rupee is certainly worth less than 1*s.* 4*d.* Such a method of tinkering with the currency can only be recommended by those upon whom the charms of the gold exchange standard have yet a powerful hold; but it discloses an amount of ignorance of popular beliefs, tastes and prejudices, of the political and economic havoc that it will cause, for which there can be absolutely no excuse. Already the belief is generally entertained by the ignorant people that the issue of one rupee and two and a half rupee notes was a device to withdraw the precious metals from this country by a foreign government, and surely the issue of half a rupee bronze coins and light-weighted rupees cannot conduce to dispel that belief. It will only deepen the suspicion that the *Sirkar* is not dealing squarely with them. I do not think that those who talk so glibly about tinkering with the currency realise the gravity and seriousness of the political issues involved. Especially among the rural population who are undergoing untold miseries owing to the prevailing scarcity and the unparalled rise in the prices of absolute necessaries, these proposals must have a disquieting effect, and it is to be sincerely hoped that uneasiness and agitation will not be accelerated among them by the adoption of such proposals.

37. The practical difficulty will be no less serious. It is not stated whether the existing rupees are to be withdrawn and replaced by the hundred grain rupees or whether they have to circulate side by side with them. If both the post-war and pre-war rupees are to circulate, they cannot circulate in the same value. The prices of commodities will have to undergo a further adjustment and more "tinkered" rupees will have to be given for the same commodities, than the old rupees. Or if the old rupees were to be withdrawn, and the hundred grain rupees were to be the only legal tender, there will be such a rise in the price of commodities as will drive the people to despair and to acts of violence of which the Government have had a foretaste in the food riots of last year in different parts of the country. The sullen discontent prevailing all over the country which breaks into arson and murder and riot at the slightest provocation has only an economic background, the problem of poverty, and if to it is to be added a distrust of the capacity of the Government machinery to cope with the situation, it would rob authority of all that glory and prestige on which it plumes itself. I can only look upon it with consternation and dismay if along with the accentuation of that distrust the further belief is generated in the people that the Government itself is responsible for the acute economic distress by their policy of constant tinkering with the currency, of which the hundred grain rupee and the bronze half rupee would be aggressive proofs.

38. More dangerous than these is the proposal to make currency notes inconvertible. It is not stated how long that inconvertibility is to continue or notes of what denomination are to be inconvertible. That inconvertible notes will suddenly be depreciated may be stated on the experience of other countries where such methods were practised by governments in the past. To what lengths such depreciation may go may not be predicted with equal certainty. Apart from the charge of breaking faith with the people who had received these notes on the distinct understanding that rupees would be given for them in exchange "on demand," the loss that the holders of notes would be put to would provoke an outburst of indignation of which the consequences cannot be foretold. No Government which claim to have a due regard and consideration for the material well-being of their subjects can think of making their currency

issues inconvertible except under the stress of imperious necessity. When such necessity does not exist there can be no moral justification for such an unrighteous deed. And when it is seen further that it has to be adopted with a view to support the Anglo-Indian merchants interested in developing our sea-borne trade, it becomes an act of spoliation of which the consequences can only be disastrous. In his "Reminiscenses," now being published, Mr. Eardley Norton, the foremost English lawyer in India, writes that a very high authority declared that an Englishman's life was sacrosanct in India and that so far as in him lay he would so enforce retribution (referring to the recent Punjab riots) as to make it impossible for an Indian to look into an Englishman's face without fear. If the currency issues payable on the very high authority of the Government of India "on demand" were to be made "not payable on demand," it would certainly not be one of the ways of making the Indian look upon the Englishman's face with fear. It is therefore fervently to be hoped that this Committee will, under no circumstances, sanction the inconvertibility of Indian currency notes, whether the governing class is going to be recruited from Englishmen of the fear-inspiring variety, whose motto is retributive vengeance, or the more common type whose word is regarded as good as his bond.

39. If the Committee agree with me that the resumption of the payment of gold for the currency issues is a necessary preliminary to all other reforms, the question will arise at what price it will have to be issued. Should gold be issued at 1*s.* 4*d.* or 1*s.* 8*d.* or 1*s.* 10*d.* a rupee or should any other value be fixed? The advantages of a high and low exchange have been discussed *ad nauseum* since the days of the Herschell Committee who found in the trade returns of this country no valuable lesson. Theoretically and practically too, so long as prices in India do not respond with mathematical precision to the value of silver, low exchange will stimulate exports and high exchange will stimulate imports. There can be no question that the cotton manufactnrer in Manchester will get a bounty of 6*d.* in the rupee if the exchange rises to 1*s.* 10*d.* from 1*s.* 4*d.* unless indeed the price of cotton goods in India fell in value to a corresponding degree. Till prices adjust themselves to the new exchange the Manchester manufacturer will be at an advantage. So with every imported article. The reverse is the case with Indian exports. But the effect is not perceptible in the trade returns by reason of the abnormal condition of Europe where war prices do not allow scope for the free play of economic forces.

40. A considerable portion of the gold remitted to England on account of the Gold Standard Reserve and Paper Currency Reserve has been remitted at 1*s.* 4*d.* To bring it back and pay it at 1*s.* 10*d.* will certainly cause loss. At 1*s.* 4*d.*, the 100,000,000*l.* would redeem 150 crores of currency notes; but at 1*s.*.10*d.* it would redeem only about 100 crores. The announcement that gold will be paid at 1*s.* 10*d.* would undoubtedly result in a rush for the yellow metal; but there is no reason to believe that such an announcement will not simultaneously reduce the price of silver. To what extent silver may fall can be judged only by the event. With every fall in the price of silver the exchange value of the rupee may be reduced till it reaches the old level of 1*s.* 4*d.* If it does not fall below 1*s.* 4*d.* gold will have to be given at the market value of silver. It may be the price we have to pay for our currency policy; but we cannot help it.

41. It has got to be remembered that these proposals are intended for the transitional stage and I am by no means inclined to recommend the perpetuation of the gold exchange standard in the Indian currency system. In fact there will be no necessity to have an exchange standard at all if the price of silver did not fall below the value of the rupee. Should it fall below that level some attempt must be made to arrest the fall and prevent its reaching the pre-war level. In that momentous reform not only this country but the whole of Europe is deeply interested. I have pointed out how the gold exchange standard is calculated to inflate the currency, increase prices and thereby unsettle contracts. I have also pointed out why it cannot be relied upon as a satisfactory measure for deferred payments. Since silver is the only metal that can circulate among the vast mass of the Indian people, it would naturally follow that the only sensible reform would be to restore the ancient silver standard to this country. We have, however, travelled far, very far, since Walter Bagehot declared that silver is the normal money of mankind. Almost every European country has adopted gold as its standard and betrayed silver. In Asia, we have followed blindly the European example; so too Japan. If China followed suit there would be such a scramble for the yellow metal that Europe would immediately think of reverting to some rational standard. Sufficient, however, unto the day is the evil thereof. Our own sacrifices to adopt the gold standard have been heavy and now that silver has had its revenge upon the mono-metallist statesmen of Europe and has more than doubled its price, the time is opportune to devise some method whereby its price may be linked to that of gold.

42. It is not merely we in India who are interested in restoring to silver the prestige and value that it once possessed, and if an humble Asiatic can forecast the future of European Finance, I may at once say that the happy termination of the war and the coming of peace will be heralded by a fierce war of commercial rivalry between the various European nations and the field for their operation and exploitation will be the silver-using countries of Asia and

Africa. The peaceful penetration of China and Siberia and the development of the habitable regions of Africa will be freely canvassed by every nation anxious to secure profitable markets for their industrial wares. Crippled and resourceless as most European nations are, and overburdened with a heavy war debt, they cannot rest content with the methods of commercial warfare in which they were pleasantly engaged in the past. I imagine that the commercial penetration of the Asiatic and African regions on an unprecedented, audacious and adventurous scale will be resorted to by both the Allies and the Central European Powers, if only to live and pay the interest of the war debt. Europe and even more than Europe, Asia, will require more gold and silver than they consumed in pre-war days to hoard and circulate. Will Europe be content with the gold standard or will she be wise in time to save herself from impending ruin by settling by international agreement the relative value of the precious metals? The opposition to such an agreement has proceeded in the past mainly from the mono-metallist group of English Statesmen, though the countries forming the Latin Union and the United States of America were in favour of it. Should opposition be still strong, I submit that the interests of India require that independent of the United Kingdom, the Government of India should arrange with America and the leading European Powers to arrive at such an agreement. As the leading Asiatic country consuming a considerable portion of the annual output of the precious metals, we are deeply interested in settling once for all the price between the two metals, so that the exchange difficulty may be erased for ever from our budgetary discussions. Should this committee find itself hampered by the terms of reference to go into the whole question, I venture to suggest that it may be submitted as a recommendation to His Majesty that an international Conference, representative of the leading Powers be summoned at an early date to settle the question once for all. Of palliatives we have had enough and having regard to the troubles and turmoils through which this unhappy country has passed during the last quarter of a century owing to the various experiments that have been initiated by the "currency crime" of 1893, it is devoutly to be hoped that the new era of peace on earth and good-will among mankind, that is to commence with the treaty of Versailles, will mark the termination of the "battle of the standards" and that a final settlement will be made as regards the value at which both gold and silver may be sold among men. What India wants is not a gold standard or even a gold exchange standard, which is neither fish, nor flesh nor good red-herring, but a standard which can be relied upon for deferred payments, which will not increase the burden of the debtor at the expense of the creditor, which will not fluctuate in value according to the Government here or a minister elsewhere, which will, in short, perform the function of "money" as satisfactorily as any standard can. That standard can only be obtained by an international settlement of the value between the two precious metals, which will open the Indian mints alike to free gold and to free silver.

APPENDIX XXII.

Memorandum by Sir Stanley Reed, K.B.E., LL.D., Editor of the "Times of India," Bombay.

I.—The General Proposition.

The goal of any exchange and currency policy for India should be, I venture to suggest, the establishment with a minimum of delay, of a free, open and automatic system, conducted with the widest possible measure of publicity. In the East, finance and currency cannot be divorced from politics; in a country of the political status of India it is inevitable that the acts of the administration should be looked upon with suspicion and distrust. The only remedy for this suspicion and distrust is the establishment of an automatic system, carried on *coram publico*, involving the presentation of such complete and regular information to the public that there can be no possible room for ignorance or misconception.

The Present Situation.

During the war many expedients were forced upon those in authority which, however necessary in order to finance the war, were not always appreciated in India, and which caused a very considerable measure of apprehension. I refer to the embargo on the import of gold and silver; the reduction of the facilities for the encashment of notes and the establishment of artificial restrictions on the movement of metallic currency; the restriction of the sales of Council bills, and the limitation of those sold to a small circle of "approved" buyers; the control of many staple articles of merchandise; the temporary shortage of rupees, which at one period brought India to the very brink of inconvertibility; and the raising of the rate of exchange above the stable level of 15 rupees to the sovereign—the goal of the currency policy adopted since 1898 and which India had made considerable sacrifices to secure. Although these discontents were submerged beneath the determination to win the war, they nevertheless

existed. They have been aggravated by the course of exchange since the signing of the armistice. Rightly or wrongly, opinion in India looked for a rapid return to normal conditions; it has been faced by an aggravation of those disturbances. Exchange has risen to over two shillings the rupee. Business has been paralysed. A telegram to *The Times*, dated Bombay, August 26th of this year, reported that "At present the Indian export trade is practically at a standstill; the Calcutta tea sales are suspended; the price of cotton shows a heavy fall, and doubt and uncertainty prevail in all markets." These disturbances have shaken the confidence in the currency system of India established by painful and laborious endeavour since 1893. People are everywhere asking where the Indian currency is drifting and whither. They have produced a situation both politically and economically of the most detrimental character and call for immediate and effective redress.

Causes of the Present Disturbances.

The main causes of this situation are common knowledge and need be only briefly recapitulated here. They arise directly from the war, and from the effort to finance a large balance of trade in India, and a very heavy expenditure in India on behalf of the Imperial Government, by means of credits abroad instead of the import of gold and silver. For the five years 1914–19, the balance of trade in favour of India was Rs. 381 crores, as compared with Rs. 391 in the previous quinquennium. But whereas in the quinquennium 1909-1914 the balance of trade was largely liquidated by an absorption of the precious metals valued at Rs. 224 crores, for the five years 1914–18 the total absorption of the precious metals was no more than Rs. 165 crores, of which only Rs. 55 crores were on private account. It is believed that the situation was aggravated by a diminution of the invisible remittance of profits from India to England, both because those profits were largely invested in the Indian War Loans, and in order to escape the high burden of taxation in the United Kingdom. During the war period the expenditure by the Government of India in India on behalf of the Imperial Government amounted to two hundred millions sterling. Starved of the gold and silver bullion, which normally plays so essential a part in the social economy of the country, the Indian people turned inevitably to rupees, which were absorbed in ever-increasing quantities. The absorption of silver rupees during the war period amounted to Rs. 110·39 crores, as compared with an average for the five years preceding the war of Rs. 43·91 crores. The note circulation has risen from Rs. 49·97 crores to Rs. 133·59 crores. The amount of the Indian reserves—the Treasury balances, Gold Standard Reserve, and Paper Currency Reserve—held abroad increased in the war period from thirty to a hundred and six millions sterling, and the metallic backing to the Paper Currency Reserve has declined from 78·9 per cent. on 31st March 1914 to 35·8 per cent. on 31st March 1919.

II.—The Remedies.

These are the conditions which have led India to a widespread demand for the stabilisation of exchange, as near as possible to the long-established ratio of one shilling and fourpence. There is the virtual certainty, owing to the favourable character of the season, that India will have a considerable surplus of the food and produce, of which the world stands urgently in need, to export. At the same time, the current of imports is falling short of the anticipations; it is known, for instance, that the provision made in the Budget for the purchase of railway material will fall far below expectations, owing to the inability of manufacturers to deliver. With great public uneasiness in regard to the exchange and currency position, an inadequate metallic backing to the Paper Currency Reserve, and the hiatus between the pre-war quinquennium of gold and silver imports and the post-war quinquennium, the balance of trade can no longer be financed on credits. At the same time the rise in the price of silver, which has passed 63 pence an ounce, precludes the possibility of adjusting the balance in rupees, or in silver only, without raising exchange to a point to which no present limit can be placed. To meet this situation three alternative proposals have been made. They are (*a*) the inconvertibility of the paper currency; (*b*) the partial inconvertibility of the paper currency; and (*c*) the paring down of the silver content of the rupee, a process commonly called debasement, a term which I reject, because it associates a sinister meaning with a currency operation which in certain circumstances under a gold exchange standard system is perfectly legitimate.

The remedies I suggest are—

(1) A free, open and uncontrolled exchange.

(2) Free trade for India in gold and silver, without any import duty.

(3) The rapid and sustained development of banking facilities in India.

(4) The establishment of facilities for the redemption by India of her foreign debt.

(5) The strengthening of the Paper Currency Reserve by the liquification of the securities now held until the metallic banking of the note issue is at least 50 per cent. and the holding of the whole of the Reserve in India.

(6) The gradual strengthening of the gold holding in the Gold Standard Reserve and the holding of this gold in India.

(7) The widest possible publicity in all matters connected with the Indian currency and exchanges, including the purchases of all metal required for the currency by open tender in Bombay.

III.—A Free, Open and Uncontrolled Exchange.

It remains to consider how best a free, open and uncontrolled exchange can be established, whether the Secretary of State should fix the rate at discretion, varying it by substantial amounts, say, twopence a time, according to the fluctuations in the price of silver, and maintaining the rate so fixed for as long as possible, possibly at some slight cost to the Indian revenues; or whether the rate should be fixed by open tender. I am strongly of opinion that the control now exercised by the Secretary of State over the Indian exchanges should be abolished at once. Official control over the exchanges is always a bad thing, and whilst possibly justified under the immense strain of the war should not be retained a moment longer than is absolutely necessary. It has already been abolished in every other country in the world and it should be abolished in the case of India with the minimum of delay. Whilst this is true as a financial proposition, it is specially true of a country in the political condition of India. The Government of India, and to no less a degree the Secretary of State, is suspect in the eyes of a large section of the Indian community. All its actions are jealously regarded, often misunderstood, no less frequently misrepresented. The Secretary of State operates six thousand miles from the great Indian financial centres. He is surrounded by and naturally amenable to, interests which are not Indian in their ideas and aims. He acts in secret, and it is frequently impossible to obtain any information in India of the groundwork of measures, which however wise and expedient in themselves, are not understood and are liable to perversion in India itself. The political disadvantages of such complete powers being exercised in secret so far from the people who are vitally affected by them, cannot easily be exaggerated. The only remedy is for the Secretary of State to divest himself as completely as possible from the management of the Indian currency and exchanges and to allow these to be governed by natural conditions. It is essential, therefore, that the fixing of the exchanges by the Secretary of State, and the distribution of Council bills amongst a limited circle of "approved" buyers should not be restored. Council bills should be sold by open tender to whomsoever may apply, the only limitation being the smallest amount to be tendered, which might be retained at the figure of ten thousand rupees. Whatever inconveniences may attach to the procedure will be outweighed by the practical advantage of freeing the Secretary of State from the suspicion, which, however unwarranted, is widely entertained, of subordinating the interests of India to those of financial institutions in the City of London, and of giving banks with their headquarters in London a preference over banks with their headquarters in India.

The relieving of the exchanges from control, and the placing of Council bills up to open tender after fixing a permanent rate for imported sovereigns will be followed by immediate oscillations in the exchanges. But an adjustment of the exchanges to their natural level is inevitable. It is the only possible means by which the financial disturbances set up by the war can be corrected by a readjustment in the balance of trade. It is not a question between a high exchange and a low exchange, between a fixed and a fluctuating exchange, but between the attainment of the natural level of exchange by the operations of the market, or the attainment of the natural level of exchange by stages fixed in the discretion of the Secretary of State—stages whose necessity will never be generally understood and which will be exposed to the certain risk of being dictated by the financial interests of London rather than by the economic necessities of India. There are disadvantages in either course, but the lesser disadvantages in the political situation of India are assuredly with that which removes from the Secretary of State the invidious task of taking arbitrary action, on grounds which may not be disclosed to the public. Ultimately the natural level of exchange will be established, and it is detrimental to the interests of India to maintain it, by artificial means, above this natural level. There is every reason to believe that after the first spasms, exchange will settle down to comparative stability, especially if this measure is accompanied by the two steps which should simultaneously be adopted.

IV.—Free Trade for India in Gold and Silver.

The first of these essential steps is to remove all restrictions on the free movement of gold and silver bullion to and from India and to establish free and unfettered trade in both precious metals. It is the inalienable right of every creditor country to determine for itself the form in which its debts shall be paid. India is a creditor country and will remain a creditor country for as far ahead as we can see. India is a bullion-using country and the present exchange and currency difficulties have largely arisen from the arrest of the normal flow of gold to India and the substitution of credits abroad by Government for the liquidation of the large balance of trade. Deprived of the normal supply of gold bullion, India has turned to the only precious metal available, and has absorbed coined rupees in prodigious quantities. There can be no financial health in India until this traditional demand for bullion is satisfied. The Currency Commission of 1913, presided over by Mr. Austen Chamberlain, laid down that "The extent to which India should use gold must, in our opinion, be decided

" solely in accordance with India's own needs and wishes, and it appears to us to be just as " unjust to force gold coins into circulation in India on the ground that such action will " benefit the gold-using countries of the rest of the world, as it would be to attempt to refuse " to India facilities for obtaining gold in order to prevent what adherents of the opposite " school have called the drain of gold to India." The demand for freedom of trade for India in the precious metals comes from every important financial and commercial authority in the land and it must be boldly and unequivocably recognised.

It is objected that India is a bottomless sink for the absorption of the precious metals, and that gold and silver once passed into general consumption in India is permanently lost to the rest of the world. This attempt to fasten upon India an exceptional and invidious responsibility for the consumption of bullion cannot be too vigorously combated. India is still an illiterate country whose credit and banking facilities are miserably unorganised, and where the practice of holding small savings in gold and silver ornaments is centuries old. Yet its normal demand for the industrial arts, and for the satisfaction of the social customs of three hundred and fifteen millions of people, was met before the war by about ten millions of gold annually. The United States of America was reported recently to be absorbing a million sterling in gold per month for industrial purposes. Yet no one says that the United States is a bottomless sink in the matter of her gold absorption. It is stated that in England one of the most flourishing trades during the war was that in cheap jewellery, in which form the working classes invested a substantial proportion of their increased earnings. Every country in the world uses gold and silver for industrial and domestic purposes, and it induces a sense of angry injustice to find that the Indian demand for the precious metals, for precisely the same purposes, is perverted into senseless hoarding, especially when the history and conditions of India would justify a far larger gold absorption than the Western nations, with their general literacy and highly organised credit systems can claim. Assuming the establishment of free trade in gold and silver, and the consequent breaking of the present premium on gold in India, the question arises what should be the new official ratio of the rupee to the sovereign. The goal should be as near a return as possible to the official ratio which has stood so long and to which all Indian trade conditions have adjusted themselves. But the determining factor is the operation of the Pittman Act, under which the Government of the United States has bound itself to restore the silver taken from the dollar holding at not less than a dollar an ounce. For as far ahead as we can see, then, silver cannot fall below a dollar an ounce. This figure should be accepted as governing the situation and the ratio should be fixed on the basis of silver at a dollar an ounce, which would make the new ratio in the neighbourhood of one and sixpence per rupee.

An important ancillary point is the position of the sovereigns which have passed into circulation, and of the gold mohurs which were issued in 1918 to meet a special emergency. The sovereign is a gold note redeemable at 15 rupees. The good faith of the Government, and the stability of the Indian currency system are bound up with the faithful discharge of this obligation. No time should be therefore lost in undertaking to redeem so many of these sovereigns and gold mohurs as may be offered for redemption at the present official ratio. Government should, therefore, without delay advertise in the *Gazettes*, in the English and vernacular newspapers, at every Treasury office and at the post offices, that they will redeem sovereigns at 15 rupees per sovereign for, say, three months. On the expiry of this period they may be left to their money value. The case for the redemption of the gold mohur at the official ratio is even stronger than that of the sovereign, for it is stamped " 15 rupees." Any failure of Government to fulfil this obligation will re-act with prejudicial effect on its future currency policy, for it will shake confidence, at a time when it is of paramount importance to restore and maintain confidence, and will deepen suspicion and mistrust, when it should be the first aim to banish both.

V.—The Extension of Banking Facilities.

The second of these essentials is the rapid and sustained development of the Indian banking organisation. On 31st December 1917, the number of head offices and branches of banks for the 315,000,000 of India was only 402. The three Presidency banks, after three-quarters of a century of lucrative existence, have only 66 branches. The progress of recent extensions is only a drop in the ocean of India's requirements. Canada with a population of less than 8,000,000, had, on 31st October 1918, 3,306 branches of banks; there have been opened in that Dominion since the signing of the armistice between 500 and 600 new branches. There are thousands of commercial centres in India where no stable banking institutions exist, and where lacking sound places of deposit, the Indian with small capital at his disposal must either keep it in the form of notes, gold, silver or ornaments, or entrust it to the local money-lender. The facilities for investment in Government securities are still inadequate.

The development of the Indian banking system is one of the pressing questions of the hour, and whilst it may operate slowly, it will operate surely in the reduction of the demand for the precious metals. Whether this development should come from the extension of the Presidency banks, or the establishment of a State bank is a secondary matter. The Presidency banks are in present and active operation, and the question is too urgent to admit

of being side-tracked whilst the establishment of a State bank is being thrashed out with the consequential paralysis of private activity whilst the prospect of State interference is hanging over it. The Presidency banks have made and are making large profits—larger profits than are justified in the case of banks which are the sole banking custodians of the public funds not retained by Government itself; they have not been called upon to render corresponding services to the community by the better organisation of the Indian credit machinery. The time has arrived when the resources of the Presidency banks should be still further increased by placing all Government funds in their custody through the abolition of the Reserve Treasuries. Coincidentally, they should be required to accept a definite programme for the development of their branches. Such a rough working programme would involve, say, the opening of five hundred new branches in the next five years. Should the Presidency banks prove either unwilling, or unequal to the discharge of this enterprise, the work would be automatically taken over by a State bank at the end of the period of grace. The execution of such a programme would involve the entertainment of a very large trained Indian staff, where only a limited supply now exists. It is only right that the Presidency banks should have the power to call on the State to establish the educational facilities necessary to furnish a sufficient supply of men trained in banking and commerce, from which the requisite staff might be recruited.

VI.—Facilities for the Redemption of the Foreign Debt.

The third essential is the provision of facilities for the redemption by India of her foreign debt. One of the recognised means of readjusting such a disturbance in the balance of indebtedness as has been set up in India by the financial operations of the war is the redemption of the foreign debt. The sterling debt of India, according to the latest returns, amounts to £173,000,000, held exclusively in the United Kingdom. Every possible facility and encouragement should be offered for the redemption of this debt by the people of India, through the establishment of agencies for the purchase of these securities in India, at the current rate of exchange, and paying interest in India free of all British taxation.

VII.—The Reserves.

The Paper Currency Reserve.

The distinguishing influence of the war on the Paper Currency Reserve is the reduction of the metallic backing to the note issue. In 1914 the metallic backing to the note issue was 78·9 per cent.; in March of 1919 it was only 35·8 per cent. It is imperative that the metallic backing to the note issue should be raised without delay. In India the weekly statements issued by the Paper Currency Department are watched with the closest attention and any undue weakening of the metallic reserve arouses distrust and induces lack of confidence. Any economies effected by a large investment of the reserve are dearly purchased by the weakening of confidence which they produce. Indian opinion is solidly in favour of the largest possible metallic backing for the note issue, and infinitely prefers this solid backing to the profits which accrue from investments. What should be the exact ratio of metal to the note issue is a technical point; but it should not be less than 50 per cent., and the higher it can be raised above 50 per cent. the greater will be the confidence aroused in the Paper Currency. The investments should be held in India, and to a limited extent, say, 15 per cent., in commercial bills endorsed by the Presidency banks.

The whole of the Paper Currency Reserve should be held in India. Whilst it may be a convenience to the Secretary of State to hold a small proportion of the reserve in London, to facilitate the purchases of silver, that convenience is dearly purchased by the weakened confidence which arises from the transfer of any portion of the reserve from its proper home, India, to an artificial home, London. Moreover, even this convenience will disappear if there is adopted the course which I shall suggest later, the purchase of all silver required for the currency by open tender in India.

The Gold Standard Reserve.

The disappearance of the metallic element in the Gold Standard Reserve has been even more complete than in the Paper Currency Reserve. On 30th September 1914, the gold held in this Reserve aggregated 11,609,000*l.*; on 30th June 1919, there was none.

In the present stage of the Indian currency there is a tendency to belittle the importance of the Gold Standard Reserve and to regard it as something in the nature of a luxury. That position is exceedingly dangerous. None can foresee the future; the only path of safety is to be prepared for all emergencies, even such an unexpected contingency as a sudden and heavy demand for sterling remittance. Whilst the first duty is the rapid liquification of a substantial proportion of the securities held in the Paper Currency Reserve, we cannot lose sight of the necessity of maintaining a large gold holding in the Gold Standard Reserve.

Early opportunity, therefore, should be taken of carrying into effect the recommendations of the Chamberlain Commission, which aimed at building up a gold holding in the Gold Standard Reserve of fifteen millions, and thereafter of keeping one half of the Reserve to whose size no present limit can be placed, in gold.

With regard to the situation of the Reserve, whilst theoretically it may be true to say that in time of emergency it can only be of service in London, that academic principle needs to be qualified by several practical considerations. The experiences of the war have taught us that the actual position of a gold reserve is immaterial, as long as it is in safe custody and earmarked for specific purposes. But we have to consider the special position of the Government of India. That Government has heavy responsibilities in the deposits in the Post Office Savings Bank, Treasury bills, and in loans redeemable at comparatively short notice. All these it is liable to meet in a country subject to financial panics, and where banking credit, although growing, is small both in comparison with the size of the country and the magnitude of the responsibilities of Government. The greater the financial power of Government, the less are its reserves likely to be drawn upon, and it will be a source of great strength to the Government of India, as was shown during the strain of 1914, if it is buttressed by a substantial block of the Gold Standard Reserve. For these amongst other reasons, I urge that the gold in the Gold Standard Reserve shall always be held in India.

VIII.—The Need for Publicity.

The success of these, and any other measures which may be adopted, will largely depend on the publicity with which they are carried into effect.

Attention has already been drawn to the particularly difficult task which the Government of India has to discharge, owing to the political status of India. That political status inevitably exposes all the acts of the Government of India to distrust, misrepresentation and prejudice. Whilst this is true of the Government of India, which is in close contact with Indian opinion, whose members are well-known in all commercial and financial centres, and where successive Finance Ministers have made it a practice for a number of years to keep in personal touch with financial and commercial opinion, it is doubly true of the Secretary of State, the final authority in all financial matters affecting India, who operates six thousand miles away, remote from Indian thought, feeling and influence, but in living contact with the London market. Experience has taught us that the only remedy for misunderstanding in India is publicity; the antidote to misunderstanding and distrust is the truth. A mountain of misunderstanding of the most regrettable character, involving political dangers of great magnitude, has been reared by the secrecy with which the Secretary of State controls Indian financial policy; this mountain can be levelled only by the truth, spread with the widest publicity. It follows then that all financial operations carried on by the Secretary of State should be conducted in public, and that the path of wisdom lies in the Secretary of State divesting himself so far as possible from the management of the Indian currency and exchanges, and substituting for this management automatic operations carried out in the gaze of the public.

An important step in this direction will have been taken if a free, open and automatic exchange is established, Council bills being sold to the highest tenderers. But it will be necessary to supplement this measure by others in the same direction. All purchases of silver for the Government of India should be by open tender to be delivered in Bombay. Quite apart from the fact that this will attract to the great bullion market of Bombay silver from all parts of the world, it is the only means whereby the cloud of suspicion which overhangs the purchases of silver for the Government of India can be dispersed. The returns relating to all operations — currency and exchange — undertaken by or for the Government of India, should be couched in the fullest possible form and published at frequent and regular intervals. The financial position of India is such that she has nothing to fear from publicity; publicity is the great instrument through which to strengthen her credit abroad and the position of the Government of India at home. *Magna est veritas et prevalebit*—but truth cannot prevail if it is interred in the archives of the Indian Office.

IX.—Alternative Proposals.

Either Impracticable or Politically Undesirable.

The alternative proposals to a free and open exchange, with its concomitants, free trade in the precious metals, an extension of the banking system, and facilities for the redemption of the foreign debt, have only to be examined to be found either impracticable or politically undesirable. They are the inconvertibility of the rupee; the partial inconvertibility of the rupee; or the fining down of the rupee.

Inconvertibility.

The inconvertibility of the paper currency is inconceivable, except in the last resort. The currency notes of the Government of India are stamped with a definite promise to pay on demand in rupees. The good faith, the credit, and the integrity of the Government are indissolubly

associated with the satisfaction of that demand. Any evasion of this definite obligation would strike a blow at the credit of the Government from which it would never recover. Further, the expansion of the note issue, which has been such a remarkable phenomenon in the recent history of the Indian currency, was, before the war, in regular response to the greater facilities for the encashment of notes which have been provided, and the strength of the metallic reserves. The exceptional expansion of the paper currency during the war, whilst a phenomenon common to all countries, is nevertheless a striking demonstration of confidence in the solidity and good faith of the Government. That faith once disturbed can never be restored. Moreover, in the conditions of India, where the mass of the population is illiterate and ripe for exploitation by the profiteer, inconvertibility would inflict great hardships on the people as a whole. The note would immediately go to a discount; holders of notes would be fleeced at every turn; two standards of value would be established—the note value and the silver rupee value—and the silver rupee would disappear from the currency for all time. There is a further consideration. It is a commonplace of currency economics that the inevitable evils of inconvertibility can only be made bearable by a plenteous provision of small change. There is every reason to believe that a decision to render the Indian note inconvertible would be immediately followed by a famine in small change. Deprived of the gold and silver bullion, in which he ordinarily holds his savings, the Indian would at once begin to accumulate small change, until small change disappeared as completely as the silver rupee. This is demonstrated by the experience of Simla in June, July and August 1918. There was a temporary shortage of rupees in the station, and small change disappeared like magic; even post offices and other Government institutions had to give change in stamps. It was found on inquiry that the hill men, who work in Simla during the season and return to their villages with their small savings on which to subsist during the winter, unable to obtain rupees, put their savings into small change. The situation was not remedied until a plentiful supply of rupees was procured. There is every reason to fear that if the Indian note were made inconvertible, the famine in small change would be universal, and that the hardships always attendant on an inconvertible currency would attain unbearable proportions.

Partial or Temporary Inconvertibility.

The second proposal is that the Government of India should usually, *i.e.*, when the price of silver is favourable, maintain the full convertibility of the note issue, but should take power, at discretion, temporarily to suspend the encashment of notes, *i.e.*, when the price of silver rose above the exchange value of the rupee. The mere formulation of this scheme argues a failure to appreciate the special conditions of India. If it be agreed that the inconvertibility of the note issue would immediately induce the establishment of a discount on notes, drive the great mass of the rupee currency out of circulation, and establish two standards of value, the silver rupee standard and the paper standard, then the same results would immediately follow from the temporary suspension of convertibility. As soon then as the currency offices were reopened for the free encashment of notes there would be a rush for rupees, in order to secure the profits accruing from the discount on notes, which no conceivable reserves could long withstand. No artificial expedient could more than fractionally arrest this rush. In a very brief period inconvertibility would again be forced on the financial authorities. Temporary inconvertibility in the conditions of India is a contradiction of terms; it would inevitably lead by short jerky stages to complete inconvertibility; indeed, it is more than possible that the mere taking of statutory power temporarily to suspend convertibility would precipitate such a run on the Paper Currency Reserves that inconvertibility would overwhelm the currency authorities whilst they were preparing to meet special contingencies.

Fining down the Rupee.

The third proposal is to fine down the silver content of the rupee to such a point that no rise in the price of silver, conceivable with the information at our disposal, would raise the bullion value of the rupee above its exchange value in relation to gold. This is practically impossible The dominating feature in the Indian currency situation is the universal use of and confidence in the silver rupee, and the immense volume of rupees, estimated at four hundred crores, in circulation.

The introduction of a new rupee, with a smaller silver content, would inevitably and immediately bring into operation Gresham's law and drive the existing rupee out of circulation. Even if the whole of the existing rupees were tendered for recoinage, it has been estimated by competent authority that it would take the powerful Indian mints, working full time, thirty years to recoin the Indian rupees. But there is no prospect that the whole, or any substantial portion, of the existing rupee currency would be tendered for recoinage. Not a single rupee would be forthcoming which the possessor could, by any bearable sacrifice, retain in his possession. There would at once spring up trade and speculation in the existing rupees, in which the illiterate population would be exploited. The Government of India would be faced with the task, at a time of shortage in the world's supply of silver and rising

silver prices, of providing India with a complete new silver currency, with very little help from the supplies of silver actually existing in the country. Apart, therefore, from all other considerations—and none acquainted with the Indian estimation of the rupee, which, bearing the image and superscription of the King, is the visible sign of the King's sovereignty, would lightly tamper with it—the fining down of the rupee is an impracticable proposition. Analogies drawn from the successful adoption of this expedient, where the volume of currency is small and a paper currency is almost universally used, are misleading and afford no guidance to Indian necessities and possibilities.

We must, therefore, dismiss the various schemes which have been put forward to enable the Government of India to maintain fixity of exchange at an artificially low rate and one divorced from the gold value of the rupee. Inconvertibility would be a misfortune so great that it should never even be considered save as a last resort. Partial inconvertibility is only complete inconvertibility in another form. The fining down of the rupee is impracticable, even if it were economically and politically desirable. There is, therefore, no alternative between a free open and natural exchange and inconvertibility and for the reasons set forth, a natural exchange is the only proposition which can claim serious attention.

APPENDIX XXIII.

Memorandum by Mr. K. L. Datta, M.A., F.S.S., F.R.E.S., F.C.U.

1. *Movement of the Precious Metals.*—Under the gold exchange standard when the balance of trade is in favour of India, India would obtain payment of it partly by the importation of Council bills and partly by the importation of gold and silver. During the war restrictions were imposed upon the sale of Council bills and on the free movement of the precious metals. Had conditions in other respects remained unaltered, these restrictions would have raised exchange, checked exports and stimulated imports, and as a result the Indian price level would have been lowered. But other more powerful influences were at work, namely, the control exercised by Government over exports of food grains, over finance, over transport in India and ocean freights and also over many of the industries, and in addition there has been a serious famine in India owing to a failure of the monsoons in 1918. All these have completely over-shadowed the effect of the restrictions imposed on the movement of the precious metals and the successive rises in exchange. An intense demand from foreign countries for Indian commodities and their purchase by Government in enormous quantities to meet the requirements of the war coupled with the prevailing famine and scarcity in India have raised prices there to unprecedented heights. Before the prevalence of famine the rise in prices in India was, however, lower than in European countries owing mainly to the control exercised by Government and the difficulties of finance and transport. An exceptionally large addition has been made to the note circulation and in order to avoid their inconvertibility the Government of India have been compelled to coin and issue a large number of rupees, a considerable share of which has gone out of circulation in order to meet the demands for arts and industries and for hoarding. The large purchases of silver by the Government of India, by China and also by most of the European countries for their subsidiary coinage, have raised the price of silver to unprecedented heights. This has encouraged hoarding and the melting of rupees for industrial purposes, as the bullion value of the rupee in India has for some time past been practically above its coin value. Hitherto gold and silver were both used for hoarding, but owing to a serious decline in the supply of gold in India, rupees have been required to do the work of both the metals in these respects.

2. The situation has been accentuated by the policy of keeping the bulk of the Gold Standard Reserve in securities in England rather than in solid gold in India. Had the reserve been in India in gold it could have been used in meeting a part of the demand now met by silver at least for hoarding if not for purposes of circulation, the Treasury Bills and other securities now held as part of the Currency Reserve taking the place of the gold in the Gold Standard Reserve. It does not appear to have been realised before that it is as much a function of the Gold Standard Reserve to prevent exchange from rising above gold point as to prevent it falling below that level. When the reserve is held in England it serves the second purpose, but the first purpose can only be served if it is held in India either in the form of gold or silver, because then only can it be issued to the public and thereby reduce the demand for silver and keep down its price. It may be argued that if the reserve is kept in bullion it would be idle and the reserve would not increase by the accumulation of interest. But the loss of interest is negligible considering the risk run by investing it. If the investments are not realisable as has actually been the case during the war, the reserve would cease to perform all its functions. In all countries of the world, bank and other reserves are kept in gold and not in securities. On the same principles a much larger share of the Paper Currency Reserve should be held in India in gold and silver than at present, and no part of it should be held in England.

3. An unfortunate effect of the restrictions imposed in various directions has been that the ryot has not received the full benefit of the intense demand for Indian commodities from foreign countries. The bulk of the profits has gone into the pockets of the middleman and the exporter. The special facilities given to some firms have enabled them to corner the different kinds of produce and thereby put up their prices and thus make enormous profits. This is reflected in the large contributions made by them to the Indian war loans.

4. It is not desirable to impose any restrictions on the import of the precious metals into India. The present arrangement under which gold when imported is required to be sold to Government at a price fixed by it to cover the cost of importing, and for the Government to sell it in small quantities to the highest bidder may continue until Government is able to accumulate a sufficient reserve of gold. The procedure, however, engenders speculation and increases profiteering. Once a sufficient reserve of gold has been accumulated in India, Government should issue it freely to the public at a rate which will cover the cost of importing so that importers may also be able to pass on their imports to the public at the same rate. Endeavours should thus be made to extend the use of gold as currency in India. It is true that for some time to come they are not likely to remain in circulation for any length of time, but will be absorbed very soon. For purposes of circulation as currency, silver is undoubtedly more suitable in India than gold, but the issue of large quantities of token rupees gives an impetus to hoarding in gold, and as a result gold is forced out of circulation. If efforts were made to keep down the volume of the rupee coinage, it should be possible for gold to circulate in India side by side with silver as in France. Gold competes with notes only because people have not been convinced that gold will always be available in exchange for notes. If greater facilities were given for the issue of gold in headquarters of districts and sub-districts and through the post offices generally, their circulation would increase. Attempts were made in this direction in the past and to a large extent were successful, but unfortunately they could not be continued for a sufficient length of time to induce confidence among the masses. Past experience shows that when the imports of gold in India were substantial, gold coins did actually circulate The following figures show that India wants more gold than silver, and that the imports of silver were increased only when there was a fall in the imports of gold.

In Lakhs of Rupees.

	Imports of Sovereigns and Gold Bullion.	Imports of Silver Bullion and Coin.
1909–10 - - -	- 21,68	9,37
1910–11 - - -	- 23,98	8,57
1911–12 - - -	- 37,76	5,29
1912–13 - - -	- 37,58	6,57
1913–14 - - -	- 23,32	6,24
1914–15 - - -	- 8,45	10,01
1915–16 - - -	- 1,98	5,58
1916–17 - - -	- 4,20	2,16
1917–18 - - -	- 21,46	1,46
1918–19 - - -	- 7,36 (excluding bullion)	49,77

5. The foregoing figures clearly indicate that the heavy issues of rupees in 1918–19 were the result of the very small imports of gold in the previous three years. Gold is undoubtedly preferred by those who can afford it, whether for purposes of hoarding, ornaments or even circulation. Silver is required only by the poorest classes. Now that the price of silver bullion has risen there will be an unusual demand for gold the moment it can be had at its proper price as distinguished from its present scarcity price. Gold will then replace and bring out a large portion of the rupees which are now in hoards. It is thus gold and not silver which India now wants. Whenever in future additions to the metallic currency become necessary, the additions should be in gold which should be imported in settlement of the balance of trade. Steps should be taken at once to realise in actual gold as much as possible of the sterling securities now held in the Gold Standard Reserve and the gold should be located in India. The silver portion of the Paper Currency Reserve should also be gradually strengthened by realising the sterling securities now held in the reserve and devoting the realisations to the purchase of as much silver as may be obtainable at a reasonable price. it is not suggested that purchases should be commenced at once, but only when prices have fallen and the purchases should be continued in such a manner that the price of silver may not continue to fall as in the eighties. The Paper Currency Reserve, whether in silver or gold, should also be located in India. Silver should also be purchased by tenders in India and not as at present through a few select firms of silver brokers in London. The portion of the Currency Reserve now invested in Government of India securities should not be increased. Such securities are practically unrealisable and such investment practically means the application of a portion of the reserve for capital expenditure by Government, which cannot be realisable. The Government of India has been raising during the last few years and will have to continue to raise in the future as much money by loans from the Indian market as may be available, and any further borrowings from the Currency Reserve will be practically untransferable to the market. A portion of the reserve may be set aside for discounting mercantile bills during the busy season to facilitate trade and the same may be invested

during the slack season in British Treasury Bills or other similarly easily realisable securities, but the whole of the balance, which should not be less than 60 per cent., should be held in silver coins and bullion.

6. *The Rate of Exchange.*—It is a matter of great importance for Indian trade that there should be a fixed rate of exchange between the rupee and sterling. Fluctuations in the rate engender speculation and make trade a matter of gamble, and as both the exporters and bankers keep a safe margin, it is ultimately the ignorant producers who lose. The value of all foreign capital sunk in the country depreciates, being at the mercy of the fluctuations in the rate of exchange, and further capital feels shy of going into the country and thus its development is retarded.

7. The rate of exchange should continue to be 2*s.* as at present. The present fluctuations in the price of silver appear to be more or less temporary, and if India can abstain from entering into the silver market again for some time to come it does not appear likely that purchases by China and some other countries alone will raise the price to any very high level notwithstanding any combination among silver producers. Should, however, silver rise notwithstanding all that the Government of India might be able to do, the rate of exchange should be raised from time to time so as to prevent the exchange value of the rupee from being below its bullion value for any considerable period. If the Secretary of State can abstain from buying silver and if gold is allowed to be imported into India more freely, it seems probable that the price of silver will go down, but not to the pre-war level. It seems likely that it will fluctuate round a point much higher than in pre-war days. If there is a fall, past experience shows that it will be possible for the Government of India to maintain exchange at 2*s.* If with silver at 23*d.* it was possible to maintain the rupee at 1s. 4*d.*, it should not be difficult to maintain it at 2*s.* even if silver should go down to 40*d.* or lower.

8. *Probable Future Course of Indian Trade.*—With famine conditions disappearing in the next season and the prospects of a large increase in the imports not being very encouraging, the balance of trade in favour of India is likely to be still more favourable. India's chief exports are jute, cotton (raw and manufactured), grain and pulse, hides and skins (raw and tanned), tea and seeds. The exports of these depend on their supply and their demand from foreign countries. Ordinarily successive rises in exchange should have curtailed exports and brought down prices. Owing, however, to the intense demand for these articles from foreign countries, India has been able to export large quantities, and this has been accompanied by a large increase in prices in sympathy with an increase in foreign countries. The increase in foreign countries has, however, been much larger owing to the immense rise in freights and insurance. and owing to the exports being practically in the hands of a favoured few. Successive rises in exchange have not yet been able to bring down prices in India. It may, therefore, reasonably be expected that a further rise in exchange will not be able to reduce prices as the foreign demand for Indian products is likely to continue at least for some time to come to be as effective as before. As soon as these demands fall off owing to a growth of production in other countries prices in India may fall; but the return of normal conditions in Europe will give a special stimulus to its industries and the demand for raw materials from India is not likely to slacken much.

9. *Council Bills.*—The present arrangement for the sale of Council bills appear to be unsatisfactory. They should be ordinarily limited to the requirements of the Secretary of State, any extra amounts required by trade being found by the exportation of the precious metals to India. Now that the war has come to an end there is no reason why India should be compelled to part with her goods except in a manner suited to serve her best interests. As the demand for Indian products from foreign countries is still very intense and is likely to continue to be so as long as the world's production does not overtake the demand, India can very well dictate her own terms for parting with her commodities.

10. *The Economic Conditions of the People.*—India is a large continent and the economic condition of the people varies widely in different localities, and even in the same locality the conditions of the different sections of the community are different. Broadly speaking the population of India may be divided into the following classes, the percentage of each to the total population being also noted:—

	Percentage.
I. Cultivators	50
II. Agricultural labourers	13
III. Rent receivers	7·8
IV. Agents and raising of farm-stock	2
V. Fishing	·6
VI. Industries	11·2
VII. Transport	1·7
VIII. Trade	5·2
IX. Public administration and liberal arts	2·9
X. Domestic service	1·5
XI. Others	4·1
TOTAL	100

11. The most important section of the community are the cultivators, who form 50 per cent. of the population. As a rule they grow their own food and to ascertain therefore the changes in their real income resulting from rises or falls in prices, comparisons should be made between their expenditure as measured by their payments for rents or land revenue, wages and commodities purchased, and their income as measured by the prices obtained for their produce sold. Before the war cultivators were benefited by the rise in prices, because the rise in prices of their own products were much higher than the rise in prices of articles mainly consumed by them, *i.e.*, articles on which they spend their income from the sale of their surplus produce, as for instance, cloth (cotton and woollen), kerosine oil, salt, sugar, copper, brass and bell metal, and other ordinary articles of luxury consumed by them. Labourers also benefited, because their wages, except in a few industries, rose much higher than prices. The evidence about the general prosperity of agriculturists and wage-earners as a class is dealt with in detail in my report of 1914 on the inquiry which I made about the rise of prices in India. The rise of prices, however, adversely affected a considerable part of the other classes, especially those with a fixed income, including landholders, *i.e.*, those whose main source of income is the rent of their lands let out on more or less permanent leases. On the whole I may say that about 70 per cent. of the population benefited by the rise in prices in pre-war days. Since the war, however, conditions have changed materially for the worse for even a considerable proportion of the very classes of the population who benefited by the rise in prices in pre-war times. Even if the effect of famine and scarcity be disregarded, the prices of most agricultural commodities have risen, but prices of the articles on which most of the agriculturists spend the income from the sale of their surplus produce have risen much more, namely, cloth, kerosine, copper and yellow metal, galvanised iron, salt, sugar, matches, betel-nuts, &c., and the effect has been that the purchasing power of their income from the sale of surplus produce has fallen very substantially. Wages also have not risen *pari passu* with the rise in prices. A considerable proportion of the agriculturists and labourers live from hand to mouth, and the unprecedented rise in the prices of the bare necessaries of their lives is pressing very hard upon them. The only classes of agriculturists who are able to sell a considerable share of their own produce and thus get a substantial agricultural income are those who grow rice in Burma, wheat, cotton, oil-seeds and jute, and even many of these cultivate these things only to a comparatively small extent and were able to save little or nothing even in pre-war times. The total acreage cultivated with these crops is only about 25 per cent. of the total cultivated area, namely, rice in Burma 4, wheat 9·5, cotton 5·0, oil-seeds 5·1, and jute 1, so that high prices may at best benefit only 25 per cent. of the agriculturists, or about $12\frac{1}{2}$ per cent. of the whole population. In many of these cases, ignorant and uneducated as the great majority of them are, the profits accruing from high prices have not reached them, but have only filled the pockets of the middlemen and exporters. A fall in prices will therefore be welcome to probably about 85 per cent. of the population.

12. *The Effect of High Exchange on Trade.*—Ordinarily the effect of high exchange will be to restrict exports and to stimulate imports and thereby lower prices. But in regard to commodities in which India has a virtual monopoly, such as jute, the burden of exchange will be transferred to the consumer. Even in regard to other articles, until the world's supply overtakes the demand, a higher rate of exchange cannot reduce prices. Though an appreciation of the rupee should in its nature cause trade depression it must not be forgotten that the foreign demand for our goods and the prices of our staples in foreign countries are not the same as before. Under the present circumstances of India there are important factors which would mitigate and modify the effect of the ordinary economic law. The foreign demand for Indian exports like jute, rice, wheat, cotton or oil-seeds is still, notwithstanding the end of the war, very intense. As a consequence a considerable share of the burden of the rise in exchange should fall on the consumer. This is borne out by the exports of the first four months of the current financial year which have been published already. These show that compared with the previous two years in consequence of scarcity and famine there has been a serious decline in the exports of grain and pulse amounting to 14,37 lakhs of rupees and 15,63 lakhs of rupees respectively. But the whole of this loss has been made up by other goods. And taking the export trade as a whole the exports of the first four months of the current year show an excess over the two previous years of no less than 11,69 lakhs and 20,11 lakhs respectively. It is possible that the price of some of the exported articles, namely, cotton or tea, may drop, but this will affect only a very small section of the community. A fall in the price of cotton will, however, be welcomed by almost every section of the community, except the cotton grower himself.

13. *Effect on Wages.*—There are no reliable statistics to show how far wages have risen, but there is hardly any doubt that they have not risen to the extent necessary to compensate the labourer for the rise in the cost of his living. The latest publication of the Director of Statistics gives figures up to 1917 only. It, however, shows that in many cases there has been no increase at all, while in some cases there have been rises from 5 to 10 per cent. or more but it is only in very rare cases that there has been an increase of 20 or 25 per cent. Wages in India are very slow to adjust themselves to any rise in the cost of living, but once they have risen there has been no instance in the past in which there has been a fall consequent on a fall in the cost of living. It is therefore clear that the wage-earner will

gain if there is a general fall in prices. So far as the producer is concerned, to the extent which the additional burden of the rise in exchange may not be transferred to the consumer, he will be compensated by a fall in the prices of the commodities which he consumes, but does not produce.

14. *Effect on Industries.*—So far as the jute industry is concerned it is a monopoly, and the capitalist will continue to make the same huge profits which he has made during the war. The following figures showing the profits of jute mills are quoted from the report of the Director of Statistics in India:—

Years.	Net Profits.	Ratio of Net Profits to Paid-up Capital.
	£	Per cent.
1914	823,000	10
1915	4,661,000	58
1916	6,155,000	75
1917	4,305,000	49
1918	10,578,000	113

15. These figures relate to forty-three companies of which statistics were available. The profits shown are after deduction of Indian income-tax and super-tax, and the reserve set apart by some companies for income-tax, super-tax, and excess profits tax. In the case of sterling companies, British income-tax, British excess profits duty, Indian income-tax and super-tax and the reserve set aside for these liabilities have been deducted. Debenture interest, has of course been deducted in every case. These figures speak for themselves. It is difficult to see the justification for the Government to have allowed these capitalists to earn back three times the whole of their capital during the last four years of the war. Everywhere there is talk of the nationalisation of different kinds of industries and of the necessity of Government taking steps to stop profiteering. The jute industry in Bengal seems to be an unique instance in which the Government might have stepped in, nationalised the mills and utilised the profits for the benefit of the general taxpayer.

16. As regards the cotton industry, wages in India not having responded to the rise in the cost of living as in England, the cotton mills also have succeeded in making large profits. Although a high rate of exchange may reduce their profits, they should still be in a better position than the Manchester mills in consequence of the cost of production in India being much lower than in Manchester and of the fall in the prices of machinery, &c.

17. One great effect of a high rate of exchange will be to cause a substantial reduction in the rupee equivalent of the home charges, and will benefit the country as a whole as this large saving in the total expenditure will be available to meet the immediate needs for the development of India in many directions, especially in regard to education and sanitation. It will also amply compensate for any loss which may fall on India in the depreciation of its present holdings of sterling securities.

APPENDIX XXIV.

Memorandum by Mr. J. N. Stuart, representing the Indian Tea Association.

It is probably unnecessary to impress on the members of the Commission the great importance of the Indian tea industry; suffice it to say that, according to the latest published Government official figures, the capital of the joint stock companies engaged in the production of tea is 22,000,000*l.*, besides large investments out of reserves and revenue, and in private gardens.

The total acreage under tea is 664,284 acres.

The outturn for 1917 was 370½ millions of pounds (the crop for 1918 was 374 millions).

The number of persons employed directly on tea gardens was 752,000, besides a large number indirectly deriving their livelihood from the industry.

1. The Indian tea industry has been adversely affected—

(*a*) by the difficulty of selling bills in India, or of sending out remittances to India,
(*b*) by the raising of the exchange value of the rupee.

(*a*) During the war it several times occurred that owing to the impossibility of getting returns to cover their purchases the banks were unable to purchase the bills of the tea companies; after some pressure, the difficulty was met by the Government of India including

tea among goods of "national importance," the Secretary of State guaranteeing the banks against loss in exchange on their purchases up to a certain figure. Under this arrangement the large purchases of Indian tea (two thirds of the whole crop) by the Food Controller in 1917 and 1918 were financed.

This system of guaranteeing the banks has, I believe, been stopped, and the present position is most serious. The banks will not purchase bills in Calcutta, unless at the same time the seller supplies cover for a corresponding amount: that is, he must be able to place against his bills contracts for sale of remittances homewards to an equal amount, and to obtain these he is obliged to pay a heavy premium to merchants who have remittances to make; this premium has reached as high as 15 per cent. Unless there is some alleviation of the position, there seems no limit to the amount of premium which may have to be paid. It must be borne in mind that the tea industry cannot, like manufacturing concerns, reduce expenditure by stopping manufacture. A tea garden must be cultivated or in a few weeks it lapses into jungle and is ruined, while trouble would arise if the coolies, who cannot turn to other work, do not receive their pay regularly.

The Secretary of State has more than once suggested to the Indian Tea Association that the English tea companies should borrow in India for their requirements, but this is no remedy; it would rather aggravate the position by heaping up debts on the other side, which must sooner or later be met by remittances from England.

So great has been the pressure on the tea companies that, during August and September, when exchange was officially 1*s.* 10*d.*, they were offering 1*s.* 11¾*d.* to merchants here for remittances without success, the best counter offer being 2*s.* 0¾*d.* In Calcutta they were selling bills to the banks on the basis of 5 to 4; which means that when they contracted to sell, say, 50,000*l.* of bills, they at the same time contracted for 40,000*l.* remittance drafts; they sent in bills for 10,000*l.* only, and paid the banks the difference between the buying and selling rates on 40,000*l.*, and cancelled the contracts to that extent. This method has, however, been stopped as contrary to the spirit of the agreement between the banks and the Secretary of State, but it shows how urgent was the necessity to sell bills.

If it is urged that the British companies might sell their tea in Calcutta, it would be merely necessary to point out that the buyer of the tea, faced by a high exchange, would give a correspondingly low price, and in practice that is what he does.

(*b*) The raising of the exchange value of the rupee from 1*s.* 4*d.* to 2*s.* has increased the cost of remittances to India by 50 per cent. As rather over two thirds of an English company's expenditure has to be paid in India, the cost of producing tea has been increased by about 33⅓ per cent. by the rise in exchange alone. The following figures show the increased cost of purchasing tea in Calcutta as compared with pre-war times:—

Tea which is bought in Calcutta at 9 annas per lb. costs an increase—

For exchange - - - - - -	of 4½*d.* per lb.
Freight, dock charges - - - - -	,, 2½*d.* ,,
Premium for providing cover 10 per cent. - -	,, 1½*d.* ,,
	8½*d.* per lb.

or nearly *doubling* the cost, delivered *ex* London warehouse. If the present high rate of exchange were perpetuated, it would tell most seriously on the industry, for the effect of the increased price would certainly check the consumption, and the development of the industry would be stopped.

During 1917 and 1918 the Indian tea industry was to a considerable extent saved from loss in exchange owing to the contract made with the Food Controller under which he took over two thirds of the crop in Calcutta, and paid for 60 per cent. of his purchases at 1*s.* 4*d.* exchange, the remaining 40 per cent. being paid for in London. Now, however, the increased cost caused to the industry by the sudden and somewhat artificial rise in exchange is too serious, both from the point of view of the producers and from that of the consumers.

At present India is at a disadvantage as compared with Java and Sumatra, where the increase in price of silver has not affected the exchange, and if Indian exchange should be fixed at a high rate, and silver falls in price, India will be at a disadvantage compared with China.

I have referred to the rise in exchange as "somewhat artificial," for I am of opinion that the Secretary of State might have relieved the position, or prevented it reaching the present stage, by removing the restrictions on the import into India of gold and silver, more particularly the former. The free importation of gold would instantly give relief, and I respectfully urge the Commission to treat this as a *matter of urgency*, and recommend the Secretary of State to cancel the existing restrictions at once. At present the Government of India is paying for imported gold at the rate of Rs. 11.11.0. per sovereign, and is selling it at a minimum of Rs. 15/–; a profitable enough transaction, if any large quantity of gold can be secured, but one which is seriously injuring the local industries of India.

The system of selling Councils to banks and firms on the approved list has proved satisfactory, as it has tended to keep exchange from soaring too high, but the quantity of Councils has been too short for trade requirements.

2. A fixed rate of exchange is of great advantage to Indian trade, but it is not of cardinal importance. It is certainly a convenience to a merchant in entering into a transaction to know that exchange on his imports or exports will be fixed or within close limits; it makes business easier, as it reduces the risks, and therefore tends to increase its volume, but it is, in my opinion, far more important from the point of view of Indian industries that no attempt should be made to fix it till conditions become normal.

A crying want of India is the establishment of industries which shall give employment to large numbers of the growing population, who otherwise will have nothing but the cultivation of land by which to gain a livelihood. The large development of the iron industry has opened up prospects of manufactures new to India, and has caused the starting of a large number of factories which will not be able to compete with imported goods if a high exchange is fixed. I trust the Commission will recommend that no fixity of exchange will be attempted until the rate comes down to the neighbourhood of 1*s.* 4*d.* or thereabouts.

3. As regards internal currency, I am told by tea planters lately come from Assam that paper rupees are not in favour with the coolies—firstly, because the bazaar dealers cut one anna in the rupee, and secondly, because paper money is very unsuitable for a climate which is so damp; during the rains the coolie who works out of doors has no means of keeping his paper money dry; some gardens pay one third of the wages in paper money, others pay entirely in silver rupees. If it were attempted to pay all the wages in paper, the coolie would change it at once for copper coins.

In the colliery districts, which are nearer Calcutta, I am told that the coolies are accepting paper money more freely.

25 *Sept.* 1919.

APPENDIX XXV.

Memorandum by Professor H. Stanley Jevons, M.A., F.S.S., University Professor of Economics in the University of Allahabad.

In response to the invitation to submit evidence for use of the Indian Currency Committee, I have the honour to submit the following statement containing replies to many of the questions submitted for the consideration of witnesses, with some additional remarks.

1. *Question I.* (*a*).—The restrictions on the import of gold and silver probably helped the export trade a little by providing rather more currency than would otherwise have been available; but the fact that silver could not be freely imported for trade use in India doubtless tended to increase the melting of rupees, and thus the effects of obtaining more silver for the mints were to a considerable extent offset by more rapid wastage of the circulation.

2. *Questions I.* (*b*) *and* (*c*).—The raising of the exchange value of the rupee and limitation of the sales of Council drafts both tended to curtail the volume of export trade from India; but of course both steps were necessary. The raising of exchange tended particularly to reduce the prices of commodities largely exported (or at least kept them from rising as fast as they otherwise would have done). Both measures *tended* to, and most probably did, keep prices in general in India at a lower level than they would have risen to if exchange could have been kept at 1*s.* 4*d.*, and if Councils could have been sold up to the full trade demand.

3. *Question II.* (*a*).—The maintenance of a fixed rate of exchange between the rupee and sterling is certainly a matter of cardinal importance for Indian trade, import and export. All distant trade involves the ordering of goods at definite prices many months before they can be sold to the consumers. They may then have to compete with goods newly imported at a more favourable rate of exchange. For exports the same is true *mutatis mutandis*. Great difficulty is caused also in the usual credit transactions.

For the past hundred years economists and business men have been unanimously in agreement as to the disadvantages of a fluctuating exchange rate. The ordinary merchant of good standing wants the greatest measure of certainty possible in his transactions. A fluctuating exchange tends to breed a class of highly speculative traders who make their profit out of the turn of the exchange rate. Not only is this profit lost by the legitimate traders and/or the producers and consumers of the goods; but much trade never comes into being which would have grown up with a stable exchange.

I do not think that the disadvantages of a varying exchange rate could be counteracted by any practicable scheme. Government insurance would be the only possible measure, and it is not worth considering when a fixed exchange is perfectly practicable.

4. *Question II.* (*b*).—The probable course of Indian trade in the near future would seem to be the continuance of the present excess of exports over imports leading to a large favourable balance of trade. The reasons for this anticipation are: (1) the levels of general prices which were greatly disturbed by the war are not yet again equated; (2) the probabilities are in favour;

of harvests as a whole being above the average during the next two or three years; (3) there is likely to be a gradual lowering of shipping freights caused by the release of tonnage and by new building.

Some further explanation of these various causes may be given as follows:—

(1) The equation of Indian prices within and without would take place if the general level of prices in the rest of the world were to fall; but this seems hardly likely to happen for some two or three years at least. Assuming exchange to remain at its present level (1*s.* 10*d.*), therefore, the equation of prices will take place in the usual manner, by an excess of exports over imports continuing until prices in India have risen to a level equating them with prices in the other principal commercial countries of the world. As shipping becomes more rapidly available, say next year, the rise of prices in India to the foreign level will take place more rapidly and constitute a grave political danger. It is true that India will begin to increase her imports, especially of machinery and plant of all kinds, which were not obtainable during the war; but it may be pointed out that the prices of many commodities must still rise considerably in India before profits will be great enough in many industries to pay interest upon the very high capital cost of the new machinery. This limits the growth of the imports of machinery and plant as an offset to the excess of exports.

(2) There seems to be a rough periodicity of crop yields as a whole, averaging about 3½ to 4 years. As we have just passed through a year of scarcity and small harvests (1918–19), we may anticipate that 1919–20 and 1920–21 will be above the average in harvests and provide a considerable exportable surplus in the latter year; unless the effects of some longer period of oscillation will be such as to create a series of years of poor harvests, as in the 1890's.

(3) It may be anticipated that when Government releases tonnage, and a large number of new ships, both English and foreign, come to be put upon the Eastern trade routes, there will be a considerable decline of freight rates, though the pre-war level is hardly likely ever to be reached again. Such lowering of the transportation costs for both the import and export trade will tend to delay the equation of prices within and without India; and it will mean that prices of exportable food grains and raw materials will eventually rise to a higher level in India than would otherwise be the case. In the near future, however, the gradual reduction of freights means a continued favourable balance of trade.

5. *Question II.* (*c*).—The effect upon Indian trade of a further rise in the exchange value of the rupee would be somewhat to curtail the export trade and to stimulate the import trade, thus bringing about the equation of price levels within and without India at an earlier date and with a lesser rise of prices in India.

6. *Questions III. and IV.* (*a*) *and* (*b*).—The policy which I would recommend for the consideration of the Currency Committee is such that it cannot be stated fully as answers to these questions; but I think that a brief statement of what I recommend will be found to include sufficient answers to these questions

The policy I submit as the best is, briefly, that the rate of exchange be raised to 2*s.* and be permanently fixed at that rate, quite irrespective of any subsequent fluctuations of the price of silver. This would involve fixing the exchange value of the sovereign for internal circulation at Rs. 10, and the rupee would become again a token coin of unlimited legal tender, as it was from 1896 to 1915. The fluctuations of foreign exchange would again be confined within the narrow limits required by the profits of exchange banks, as they were during the above-named period.

My reasons for confidently recommending the above policy as one which would stabilise exchange and be in every way practicable, are two:—(1) The rate of exchange being 2*s.* would mean that the rupee was a token coin whenever the price of silver was below approximately 64*d.* per oz., so that subsequent fluctuations of the price of silver below this figure would in no way disturb the currency. (2) It is extremely unlikely that the price of silver will ever rise above 64*d.* per oz., except possibly for a very brief period of shortage or speculation, because at approximately this price most of the silver currencies of the great commercial countries of the West would cease to be token coins.

The demonetisation of silver having taken place in Europe when its price was about 60*d.* per oz., which is nearly equivalent to the rupee at 2*s.*, all the silver coins of Europe and North America correspond closely in the ratio of their face value to their intrinsic value with the rupee value at 2*s.* This will be made perfectly clear by inspection of the following table:—

——	Nominal Value.	Gross Weight.	Fine Silver.	Nominal Value in Gold.	Price of Silver at which Intrinsic equals Nominal Value.
		Grains.	Grains.	*s.* *d.*	*d.*
England - - -	2 sh.-piece	174·5	161·5	2 0	66
France - - -	2½ francs	192·9	173·6	1 11¾	60¾
Germany - - -	2 marks	171·5	154·3	1 11½	67½
U.S.A. - - -	½ dollar	206·2	185·6	2 0¾	59¼
ndia' - - -	1 rupee	180·0	165·0	2 0	64
India - - -	1 rupee	180·0	165·0	1 4	43

The important point about each of the above-mentioned coins is the relation of the weight of fine silver it contains to the nominal value as representing the standard gold coin, which has been converted into terms of the English sovereign at the mint par of exchange, as shown in the fifth column. From these two values it is easy to calculate what is the price of bar silver at which the intrinsic value of the coin becomes equal to its nominal value. It will be seen that this would happen at the lowest price for the United States (at 59¼*d.*) and next for France (and the Latin Union), whilst with the rupee at 2*s.* India would have her silver coinage valued nearly as high as that of England and Germany.

The inference to be drawn from these facts is that once the rupee had been permanently valued at 2*s.* it would be protected against a further rise of the price of silver by the vast mass of silver coinage of the whole of Western and Central Europe and the United States and Canada, not to speak of a dozen other countries which have adopted the gold standard and fixed the token coinage of silver to correspond with the European value. The one fact that practically all the great countries of the world have, for many decades at least, coined silver on the basis of an intrinsic value equivalent to 60*d.* per ounce makes it practically impossible that the market price of silver could ever rise more than two or three pence above this, and then for a few days only in a speculative boom.

From the considerations just given it will be obvious that it is exceedingly unlikely that it would ever be necessary to raise the rate of exchange above 2*s.*

7. *Question IV.* (*c*).—In my opinion it would be extremely unwise to issue a new rupee containing a smaller weight of silver than the present rupee. There would be grave risk of serious economic and political consequences following. It would be thought that this was almost a permanent admission of weakness on the part of the British Raj. The new rupees would be looked on with the greatest disfavour and would be refused so far as they could be recognised. In large transactions they would be weighed and would only be accepted at a discount. It would be several years before the new rupees would be likely to form more than 20 per cent. of the active circulation, and thus for some decades we should have prices quoted in two kinds of rupees. There is sufficient confusion in the railway and British Settlements in Hyderabad State, where a lighter rupee is in circulation, for us to see on a small scale what the effects would be throughout British India. Tampering with the weight or fineness of the standard coin is surely the very last resource that ought to be adopted. There being other courses open it would be wholly unjustifiable.

8. *Question IV.* (*d*).—I see no reason why the Government of India should buy silver for conversion into currency at a loss. Small purchases might, if necessary, be made occasionally at a loss for the purpose of keeping the mints busy; but the average throughout the year should rather involve a profit to the State than a loss.

The real objection to allowing the rate of exchange to stand at a lower level than corresponds with the price of silver is, however, that this would mean necessarily a control of the export of silver, otherwise it would always be profitable to buy drafts on India at the current rate and collect new rupees and even perhaps to buy bar silver for purposes of export. If such export trade in rupees were permitted it would create an economic situation tending to restore the balance. Prices quoted in silver rupees would fall relatively in India, the balance of trade would become more favourable to India and the rate of exchange would tend to rise. If the exchange were kept fixed the latter tendency would resolve itself into an abnormal growth of the Secretary of State's balances in London, due to an abnormal demand for Council drafts as during the War. Meanwhile currency notes would have to replace the silver in circulation, and notes would fall to a heavy discount.

9. *Question IV.* (*e*).—I think it would be very unwise for the Secretary of State to continue selling drafts on India although sufficient metallic currency could not be provided to meet the demands for encashment in India. The notes would become practically inconvertible and would be certain to fall to a heavy discount, as happened in many of the cotton-growing districts during the present year, when sufficient currency to finance the export trade could not be freely obtained.

10. *Question V.*—Inconvertibility of the note issue would result in prices being quoted in rupees and in notes for a considerable period. Silver would be driven more and more out of circulation both by melting and export (unless prevented) and the inflation of prices in India in terms of paper money would continue. The rate of discount of notes as against rupees would probably be fluctuating, which would introduce uncertainty into internal trade. There would be many opportunities of exploiting the poorer classes, both the cultivators and the labouring classes of the cities. This would cause great discontent and might become politically dangerous.

11. *Question VI.*—It appears to me that present restrictions on the import and export of gold and silver should be removed as soon as possible, so that ordinary freedom of trade in the precious metals may be resumed, at any rate within two or three years. The policy I have recommended of permanently fixing exchange at 2*s.* would enable the restrictions to be removed within a measurable period. The main difficulty that presents itself is as to the regulation of the import of gold. The present internal price of the sovereign is from Rs. 17 to

Rs. 18. Obviously enormous profits could be made on imported gold at an exchange rate of Rs. 10. It appears to me that all this profit should go to the State and that the price of the sovereign in internal circulation should not be officially proclaimed at Rs. 10 or at any figure lower than the existing legal rate of Rs. 15 until the Government has put such an amount of gold into circulation as may prove necessary to bring the rate down nearly to Rs. 10 for internal circulation. This involves a Government monopoly of the import of gold and disposal of gold mined in India, which is a perfectly sound economic policy, because such restriction can be pretty closely enforced as regards both mining and imports of large consignments.[1] When the price of the sovereign shall have become reduced to say Rs. 11 or Rs. 12 in India, freedom of importation might be permitted. The reduction of the price of the sovereign would naturally take place all the faster if Government were to announce that the legal ratio for internal circulation would be ultimately Rs. 10 to the sovereign, and that freedom of import would be allowed at no very distant date, though the date need not be specified.

12. *Question VIII.*—In my opinion the amount, constitution and location of the Gold Standard Reserve require careful reconsideration The total amount of the Reserve, it appears to me, need not be more than one-eighth of the highest value of imports reached in any previous year.[2] The Reserve should undoubtedly be held mainly in London, so as to enable exchange to be maintained by the sale of Reverse Councils. At the same time, it would appear desirable that a fair proportion of the Reserve should be held in actual gold, in vaults at the India Office, and also a small part of the Reserve as gold in India, which could be used for the purpose of export, if necessary. Conditions of exchange might arise in which it was desirable to ship gold to Australia or the Far East or even the western coast of America, and for this purpose gold situated in India would be advantageous. Normal changes of the balance of trade should be met as far as possible by the credit money of the Gold Standard Reserve held in London, and possibly also by holding some credit in Paris and New York; but the ultimate eventualities of a crisis, political or commercial, can only be met by the possession of actual gold, and this precaution ought not to be neglected.

Note on the Effects of the Rise of Prices in India on the Poorer Classes and on the Advantage of Raising the Exchange Value of the Rupee to Prevent Further Suffering.

13. The general rise of prices in India, which has been in progress since 1894, has become particularly severe since 1915; but it is only during the past fifteen months that the prices of foodstuffs have risen in a marked degree. Previously the rise of prices did not affect foods so much as clothing, salt and metals, of which brass is important to all but the very poorest. Since the early cessation of the monsoon of 1918 the prices of foodstuffs have advanced so considerably that even where famine or scarcity did not prevail, the poorer classes of the population suffered intensely, though almost everywhere silently. Of course those cultivators who successfully grew commercial crops, such as cotton, jute, linseed, &c., have not been so badly off; and those few who were able to show a normal area of wheat last winter have done well. In the rural districts, however, nearly half the population are labourers earning wages for part or the whole of their time. When the wages are paid in grain the labourer does not suffer by the rise of prices; but the practice of paying grain wages has been more and more falling into disuse, or is substituted by a measurement based upon price, virtually a cash wage. The universal experience in India as elsewhere, is that the cash wages of labourers do not rise anything like so fast as the cost of living. Wages and salaries lag behind, taking some three or four years before they are again equated to prices after a sudden rise of the latter. Whilst this has been happening to a section of the rural population, it has been similarly affecting 85 or 90 per cent. of the population of the towns. The cost of living has, in fact, risen so much that if the ordinary coolie or day labourer spends his whole earnings on food he can barely obtain adequate nourishment. The same may be said to be true of fixed-rate servants such as chaprassis, &c., if they are not receiving more than Rs. 10 p.m. Professor Lyons, of Indore Christian College, has made a striking calculation. He has taken the scale of diet of the jails of the United Provinces as officially prescribed in the Manual, and has worked out the cost of this diet for an average family of a man, his wife and two children of ages above and below five years. On this basis he finds that if the labourer spends his whole wages on food he will only be able to purchase for himself and his family 81 per cent. of the diet prescribed for prisoners of the jails. The labourer will have nothing to spend on clothing, house rent, and many small necessities required by even the poorest.

This state of affairs is quite a sufficient explanation of the wide-spread discontent and unrest which has come into existence throughout India during the past 18 months. The discontent is the result of very real suffering by many millions of people, and on these grounds alone Government should take whatever steps may be practicable to mitigate the

[1] I think the gold mines in India should be allowed a much more favourable price than the cost of importing gold—otherwise they could hardly carry on in face of increasing costs of mining.

[2] See note on p. 144.

effects of the rise of prices. The discontent due to the rising of prices has also a serious political significance in India. It creates a state of mind in which agitators can easily inflame the people to acts of violence, and lead them to believe that their sufferings are solely the result of being under the rule of a foreign Power.

The raising of the exchange value of the rupee to 2*s.* as I have suggested, would tend to check the rise of prices now going on in India and which would still have gone on rapidly for another two or three years if exchange had remained at 1*s.* 6*d.* or 1*s.* 8*d.* Government can do little to bring down prices short of putting on heavy export duties on all food grains and raw commodities and curtailing the sale of Council drafts and stopping totally the import and coinage of silver. These measures would probably bring down prices in India, but they are very drastic and would seriously damage the big agricultural and other industries, thus reducing the trade in the staple commodities of export. On the other hand, it is perfectly practicable, without doing any substantial damage to established interests, to prevent the continuance of the present upward movement of prices, by the single act of raising the exchange rate to 2*s.*, and this is the policy which I strongly advocate.

September 1919.

Extract from a Paper on "The Finance of Economic Development" read by witness before the Economic Conference, Bombay, in January 1919.

At present (December 1918) the Gold Standard Reserve consists of 35,400,000*l.* which is held entirely in London, invested mainly in War Loans of the British Government. It is very doubtful whether so large a sum is really needed. It is difficult to find any *a priori* measure by which to determine the proper size of the Gold Standard Reserve. I would say that from the theoretical point of view, it should depend upon the possible balance of payments which might arise within the next few months due to an excess of imports over exports. Such excess would arise through considerable imports being made in anticipation of a good season and long credit being given followed by a failure of the crops and a reduced surplus for export from India. If we assume the average period of credit on import trade to be three months, and if we assume that the value of the exports could hardly be less than half the value of the imports in any period, this would seem to show that the maximum figure likely to be required for a Reserve in London, needed to meet reverse councils would be one-eighth of the total value of the imports into India during a whole year. Of course this total value of imports varies very considerably; but we find that the highest amount yet recorded is 183¼ crores, or 122,160,000*l.* in 1913–14. The figure of 25,000,000*l.* is distinctly more than one-eighth of this and might, therefore, be regarded as a safe maximum for the Gold Standard Reserve.

Addendum to Memorandum by Professor H. Stanley Jevons, M.A., F.S.S., dated 10th November 1919.

(*Vide Evidence Q.* 4843.)

1.—Introductory.

The Chairman having requested me to write my considered views on the question of fixing a permanent rate of exchange with gold rather than with sterling, I have much pleasure in submitting the following observations. As some of the immediate questions concerning the Indian Currency position involve reference to the permanent economic laws affecting currency and prices, it may be a convenience for some members of the Committee if I state briefly those fundamental principles which seem to have a direct bearing on the questions under discussion.

2.—Importance of immediately devising a System with all Features of Permanence.

I would submit, and shall assume in this Note, that the most advantageous course for the future of India is to endeavour to devise and establish a currency system which should have features of permanence as well as utility. Any great disturbance of a country's currency system, such as a revaluation of the ratio of its gold and silver coins, or an alteration of the weight of its standard coin, cannot but have a deleterious effect upon its trade and industry. To a greater or less extent it gives a shock to confidence, and in this and other ways gives a temporary check to the economic development of the country as a whole, which could not be faced with equanimity in times of peace. To-day such a disturbance has been created by the World War; but if (through errors in foresight or statesmanship) there were now to be

established in India a currency system which did not possess every feature known to contribute to permanence and stability—if every precaution were not taken to render another involuntary disturbance practically impossible, and to make any intentional change unnecessary—it would indeed be a grave error of foresight and statesmanship. The need of permanence and stability in all the conceivable eventualities of peace was tacitly assumed as the foremost requirement in my statement of evidence, and will be the basis of all recommendations in the present Note. The special measures which are dictated by the exigencies of the *post-bellum* economic situation obviously need careful co-ordination with the permanent system which it may be decided to recommend for adoption.

3.—Experience of Conditions of Trade in Peace Time must form Basis of Proposed Permanent System.

Although the immediate difficulties created by the depreciation of European currencies and the dislocation of exchanges loom large at the present moment, it is wise to remember that normal peace conditions will be re-established in a few years, and all controls of trade, shipping and specie will be removed. This will probably occur in less than five years.

Consequently it would appear proper to test any proposed system of Indian currency intended to be permanent by those economic laws of currency and prices, which prevail where international trade is free, or hindered only by customs tariffs. Those laws are most perfectly exemplified by the conditions which prevailed during the long period of peace before the war, more particularly the 40 years 1874 to 1914 which elapsed since the demonetization of silver by Germany and France. The statement of economic laws which follows is based mainly on the facts of this period in all countries whose products are important in the world markets.

As every succeeding war differs in practice and in the region of its occurrence, and finds different economic conditions prevailing, it is impossible to devise a currency system which would be stable in time of a great war. Only world-wide international action could attempt this with any hope of success.

4.—The Gold Standard System.

The gold standard system is that of England, the United States, Germany, and the Latin Union. There is a standard gold coin which is actually in circulation to a greater or less extent. Bank or Government Notes, and use of cheques, replace it in the great bulk of normal transactions; but only because of the greater convenience of paper. The paper (notes or cheques) is always convertible into gold on demand in peace times. Thus more than half the total stock of coined gold lies in the reserves of the banks, central and local. The mint is open to the unlimited coinage of gold, a small commission to cover part cost of minting being usually charged, except in England.

The subsidiary coins are of silver in the larger denominations, and of bronze or nickel in the smaller; and they are exact sub-multiples of the standard coin. They are token coins, in that the intrinsic value of the metal is less than the nominal value as representing an aliquot part of the standard gold coin. The issue of token coins is subject to orders of Government, and they are issued only as trade requires.

In the case of the silver coins, however, the intrinsic value becomes equal to the nominal value when the price of standard silver is about 60*d.* per ounce, the figure being different for each country (*see* table in my first statement, p. 141).

5.—Permanent System for India.

The fixing of the sterling exchange with India is not the most fundamental and important problem. The question which dominates the whole solution of the currency difficulties is: What is to be the permanent ratio of the rupee and the sovereign (or equivalent gold coin) in the internal circulation in India? If this be fixed, everything else hinges on it.

The asking of this question indicates that it is assumed in this Note that the gold standard is to be maintained (or re-established) in India. A return to silver as the standard would be a retrograde step and is most undesirable; and it is satisfactory that this has been ruled out of the reference to the Committee.

The alternatives are, therefore, either to re-establish the gold exchange system as it existed during the twenty years 1896–1916, taking all possible measures to maintain exchange at whatever rate is fixed, or try gradually to bring sufficient gold to India for gold coin to be always available on demand at treasuries and banks in exchange for notes and rupees, which amounts to establishing the gold standard system. If the latter course be adopted, as I recommend that it should be on account of the stability that would be secured thereby, it would be incumbent on Government to take every possible measure to increase the active circulation of currency notes, so as to avoid an unnecessary absorption of gold into the circulation. The ideal should be to make gold everywhere available for the public if required; but to keep it as much as possible in reserves. The mints of Bombay and Calcutta should also be open to the unlimited coinage of gold on behalf of the public for a small charge.

Whichever system may be adopted the rupee must be a token coin representing an exact and fixed submultiple of the sovereign (or other gold coin equal in weight and fineness). It remains to decide what fraction of the sovereign the rupee shall represent.

As regards the future price of silver, the probabilities seem to be strongly against a return to a low price within the next twenty years; and during the next ten years it seems probable that the average price of standard silver will at least remain above 54*d.* per ounce. The only practicable ratios open to us are therefore 12, 11, 10, 9 or 8 rupees to the sovereign.

As the rate of 10 rupees to £1 corresponds to 64*d.* per oz., and as the price of standard silver in London (in sterling) for forward delivery has risen to 66½*d.*, it would seem unlikely that rates of 12 or 11 rupees to £1 could be maintained. The risk of silver becoming undervalued in the currency, and disappearing from circulation, would be too great. The choice lies, therefore, between 10, 9 and 8 rupees to the sovereign.

1. In favour of 10 rupees, as against 9 or 8 the following arguments may be cited:—

(*a*) It corresponds with the lowest exchange rate (2*s.* to the rupee in gold) which seems to be maintainable, because unlikely to be affected by the price of silver. As was pointed out in my memorandum (p. 141) "it is extremely unlikely that the price of silver[1] will ever rise above 64*d.* per ounce, except possibly for a very brief period of shortage or speculation, because at approximately this price most of the silver currencies of the great commercial countries of the West would cease to be token coins. A table was given showing for each of the principal countries the price of standard silver at which the intrinsic value of the coin equals its nominal value. These prices (*see* last column of table on page 141) do not represent absolutely the maximum price to which standard silver could rise in each of the countries. They indicate the price at which melting of the silver currency would begin to check the rise of price. To find the price at which the check would be become really effective allowance must be made for (1) cost of collecting heavier coins and rejecting old worn coins of light weight; (2) average loss of weight of the selected coins; (3) profit to cover risk of detection and prosecution for illegal melting or export. For all these together at least 7½ per cent. must be added. Consequently the effective maximum for the sterling price of standard silver would be 71*d.* per ounce. The price for immediate delivery might rise above this; but the price for future delivery would not go above 71*d.* until most of the silver coin at present issued, or to be issued at the same weight, had disappeared from circulation. This would mean that the highest price possible in the London silver market would not raise the gold price of silver higher than approximately $\frac{4\cdot18}{4\cdot86} \times 71 = 61d.$ with the present rate of exchange on New York. If the American exchange should recover and approach par, the London demand would be so much the more effective. The maximum might come to be determined then at 7½ per cent. above the standard silver equivalent of the dollar (59¼*d.*); than is at 63¾*d.* As America is the only important free market in gold at the present time, that figure (63¾*d.*) has considerable importance. It is almost exactly 64*d.*, which is the cost of the silver content of the rupee when valued at 10 rupees to the sovereign. I think it may be said, therefore, that the maintenance of the ratio of 10 rupees to the sovereign would most probably be practicable.

(*b*) The convenience of the rate Rs. 10 = £1 for arithmetical purposes is obvious, for all conversions can be done mentally with ease and rapidity. One lakh of rupees equals £10,000; one crore equals a million pounds sterling. One rupee = two shillings. One anna = 1½*d* One pie = half a farthing.

The advantage to be gained by thus equating the standard and subsidiary units of the Indian and English coinage systems is more important than might be thought at first sight. All foreign traders in India and abroad, of whatever nationality, must constantly be making approximate conversions in considering every possible sale or purchase; and so must all persons remitting or considering the investment of money in India. In such cases rupees and pounds sterling are equated. In considering prices the subsidiary units are more often compared and converted. The total saving of the time of business men when the units correspond is so considerable as to merit serious attention as a factor in the whole problem.

(*c*) As the sterling rate has already been raised to 2*s.* and the gold rate is already about 1*s.* 8½*d.*, the further dislocation of trade which might be caused by gradually raising the gold rate to 2*s.* would be very small. The disturbance likely to result from the rate Rs. 10 = £1 would be far less than that which must result by making the rate 9 or 8 rupees to £1.

(2) There is little to be said in favour of fixing the rupee at *9 to the sovereign*, which is equivalent to a par of 2*s.* 2·7*d.* It gives somewhat greater protection against a possible further rise of the price of silver; but the fraction is for every purpose inconvenient.

(3) There is a good deal to be said both for and against rating the rupee permanently at *8 to the sovereign.*

[1] The price in gold, not depreciated sterling paper, was intended to be understood here. That statement was written before the heavy fall of the American Exchange.

(*a*) This rate corresponds with a price of standard silver of about 80*d*. per ounce. It would give almost complete protection against any possible rise of the price of silver thus giving a greater assurance of permanence and stability to the currency system than rating at 9 or 10 rupees to the sovereign.

(*b*) The rate Rs. 8 = £1 gives a par of 2*s*. 6*d*. for the rupee. One lakh of rupees is £12,500, and so forth. The anna becomes nearly equivalent to 2*d*.—just a little less. Thus for conversion and comparison the rate of Rs. 8 to the sovereign is fairly convenient, but not nearly so convenient as Rs. 10 to the sovereign.

(*c*) This rate might cause an actual fall of prices in India, to a moderate extent soon after its being made operative in foreign exchange.

(*d*) The question whether this rate could be successfully realised in practice may, I think, be answered in the affirmative. The exchange rate can be raised whenever India has experienced good seasons and has a large exportable surplus, whilst the world's demand for India's raw materials and foodstuffs remains high. It would seem likely that this condition of a large favourable balance of trade will be realised not later than 1920-21 (*see* Memorandum, p. 141). The reduction of ocean freight-rates which seems likely to take place about the same time would also favour the export trade from India. I conclude, therefore, that trade conditions are likely to make it practicable to raise the gold par of the rupee to 2*s*. 6*d*., and this without any serious dislocation of the export trade, and with no permanent effect in restriction of trade.

The balance of advantages seem to be in favour of a permanent gold standard currency for India with the sovereign rated at ten rupees. This system would be easy to establish, very convenient in commerce, and its stability is probable, as it is not easy to believe that the gold price of silver can rise above the equivalent price (64*d*.) of the silver content of the rupee at this rating, except possibly for a short period.

On the other hand it is *possible* that the price of silver may rise beyond 6*s*. per ounce (in sterling) before demand and supply are brought into equilibrium. This, if it ever happens, may be expected within the next 18 months; and it might, therefore, be the wisest course to postpone any decision as to the final rating of the sovereign in rupees until this period has elapsed and the situation become clearer. If the gold price of silver should rise to 64*d*. per ounce, and remain at approximately that level (the sterling rate being over 73*d*.) no hesitation should be felt in taking all measures to establish the permanent currency system in India on the basis of the rupee rated at 2*s*. 6*d*. in gold. Waiting to decide on the permanent rating of the rupee to the sovereign need not delay the taking of preliminary measures, such as commencing the redemption of sovereigns at Rs. 15.

6.—Measures of Transition.

1. *Calling down the sovereigns in India.*—The principal difficulty to be faced is the present high price of sovereigns in India. The bazaar price is about Rs. 16, and thus still above the legal rating of Rs. 15. The steps which I would suggest should be taken are:—

(1) The Government of India should continue its monopoly of import of gold, and should continue to import and place gold bars on the market in India until the bazaar price of the sovereign has been reduced to approximately Rs. 15, with a tendency to go lower.

(2) The Government of India should then announce that owing to an impending change in the rating of the sovereign[1] which would greatly reduce its value in terms of rupees, Government desires to redeem all sovereigns in the hands of the public by issuing currency notes or silver rupees (or subsidiary coins) at the rate of Rs. 15 for every sovereign brought to a treasury or sub-treasury or any branch of a Presidency Bank. In so far as the public will take notes, and/or the silver in the reserve holds out, the redemption may proceed without the re-issue of gold, which will presumably go into the Paper Currency Reserve where the sovereign will continue to be rated at Rs. 15.

When further redemption of sovereigns by notes and silver is becoming difficult, the rating of the sovereign in the future permanent currency system must be at once decided, consideration being taken of the maximum gold price of silver yet reached, and probable future trend of the price of silver according as the various factors can at that moment be estimated. If 10 rupees for the sovereign appears likely to be safe it should be adopted; if not then 8 rupees for the sovereign. I shall assume for the sake of simplicity in what follows that circumstances favour the adoption of 10 rupees for the sovereign as the permanent basis.

Further redemption of sovereigns would be made by issue of an Indian gold coin of the same weight and fineness as the sovereign, but plainly marked "10 rupees" on the reverse, and in other features distinct in design from the sovereign.[2] Once

[1] The permanent rating need not be announced at this stage.

[2] If during the time required for coining and issue of the new 10 rupee gold coins, sovereigns are presented too rapidly to be redeemed in silver, interest-bearing gold certificates might be issued payable after 6, 9 or 12 months.

these new 10 rupee gold coins had been issued a term should be notified for the continued redemption of sovereigns at Rs. 15, say three months. At the same time it must be notified that after the date terminating the redemption period the sovereign will be legal tender only for Rs. 10.

The Government of India will have to face at this moment a difficulty in its own finance as it will have to write down the value of the gold in its Paper Currency Reserve by one-third to correspond with the new value of the sovereign. Silver having been issued for redemption, the amount of gold in the reserve will presumably be unusually large. If the trade demand for currency is not at the moment unusually great this writing down of the value of the gold in the reserve is a difficulty more of a legal and technical character than an actual source of risk. Assistance might be obtained from the Gold Standard Reserve, or a temporary backing could be given by Treasury bills issued in India, or additional investments could be made in British Government securities held in London, funds being lent from the Secretary of State's general balances. In reality no such backing whatever is required, as all the paper currency has behind it the whole credit of the Government of India. A temporary issue in excess of the reserve might be authorized, the excess to be reduced by stages over, say, five years; or the excess might be made permanent. In reality the metallic reserve and British Government securities are the only effective part of the reserve. When the Government of India issues against its own securities, it is but a paper transaction; and the only object of putting its own securities in the reserve is to keep up appearances for the sake of the public ignorant of economics and finance. I am not objecting to the practice, but merely pointing out that for all currency purposes it would be just as useful and safe to authorize the issue of a limited amount of notes without corresponding reserve.

2. *Raising the Exchange Rate.*—The present rate of 2*s.* at which (approximately) Council Bills are sold is the exchange rate for the rupee with depreciated sterling. Since the London–New York exchange stands at about 4.16, the equivalent gold exchange rate is approximately 1*s.* 8½*d.* The problem is to find the best procedure whereby to secure the transition from the present condition of Government control to the free importation of gold after the sovereign has been rated at 10 rupees for internal circulation, on the ordinary commercial basis as a result of a balance of trade favourable to India.

The object of Government should be to relinquish the Government monoply of import of gold as early as possible; and this might be done from the date when the redemption of sovereigns is closed and the sovereign (or equivalent coin) begins to be in circulation at the rating of 10 rupees. From that date onwards, assuming gold remains freely available in America, the inward gold point (as regards India) of the New York–Bombay exchange, say 49¼ cents for the rupee (or $49.25 per Rs. 100), will determine the sterling exchange on London. The equation is—

$$\text{Sterling exchange} = \frac{\text{New York–London par}}{\text{New York–London exchange}} \times (2s.\ 0\tfrac{1}{2}d.)$$

Here 2*s.* 0½*d.* is assumed to be the inward gold point (London to Bombay) when gold is again the effective circulation of the United Kingdom and freely available for export Consequently when the gold rate is raised to 2*s.* 0½*d.* (or corresponding New York rate) the sterling rate on London must be raised to about 2*s.* 4¼*d.*, or other figure corresponding with the New York–London exchange of the day.

It may be argued that further to raise the sterling exchange to so high a figure as 2*s.* 4¼*d.* (or even further if the dollar exchange fall lower) would seriously damage the Indian export trade. For reasons stated above, however, I think it could be done in the course of the financial year (1920–21) without difficulty and without inflicting injury on. Indian trade. The course I would recommend, however, would be to make gradual increases of the sterling exchange rate by, say, one penny at a time whenever the demand for Councils becomes particularly strong. The gold rate would then have to follow sterling upwards (the price of the imported sovereign in rupees correspondingly declining).

On the other hand, supposing the dollar exchange to appreciate, then the sterling rate should be kept fixed and the gold rate moved up; and if, and when, the dollar rate depreciated again then the sterling rate should be moved up in sympathy, and the gold rate kept fixed, not moved down. In fact it would be a principle of action affecting both rates that once it had been put up it would not be put down again; but would be supported by sale of Reverse Councils if necessary. If this policy were publicly declared (the limit of raising being the 2*s.* gold rate) it would serve as some guide to the Indian foreign merchants.

The advantage of the course which I propose is that it would little by little raise exchange until the gold rate became equal to 2*s.* As the financial affairs of the United Kingdom improve and prices become deflated, the depreciation of sterling in terms of the dollar will gradually disappear. As this happened the sterling rate on Bombay would decline in sympathy until ultimately it met the gold rate at 2*s.*

7.—The Future of Prices in Relation to Exchange.

In normal peace conditions when there is an open international market in the precious metals there is an intimate connection between the general level of prices in any country relative to prices in the other great commercial countries and its balance of trade. For example, if, in normal times, prices in general rise more in England than in France, Germany and America, English importers become active, and foreign buyers of English goods hold off. The balance of trade turns, therefore, against England, and gold is drawn from the Bank of England and shipped abroad to settle the difference. If the drain is heavy the Bank of England checks it by raising its rate of discount which in effect attracts or keeps in England foreign loan moneys. The reduction of the reserve of gold in England makes bankers more careful in granting loans; and the higher rate of discount also tends to restrict credit in England. The contraction of credit begins to lower prices in England. Similarly, English gold flowing to France and the other countries tends to inflate credit there and raise prices. Prices will continue to fall in England and to rise in the other countries until imports into England are somewhat checked and exports stimulated, and the balance of trade thus restored. The whole process is automatic.

In modern practice there are two methods of settling the balance of a country's foreign indebtedness: (1) by keeping large credits in foreign financial centres, *e.g.*, the Bank of Russia used to keep large sums in London, Paris and New York; (2) by shipping securities and specie—usually gold, but sometimes silver. The foreign credits are usually drawn upon first, and only us they approach exhaustion is the shipment of securities and gold resorted to.

In the case of India, if world prices were to fall suddenly, the balance of trade would soon become unfavourable. Exchange would have to be supported by the sale of Reverse Councils, and later by shipment of gold.

It may be asked whether exchange could be supported at the 2*s.* gold rate if the fall of world prices were long continued and considerable in total percentage fall. The reply is: (1) It may be assumed that the Gold Standard Reserve would be no less than its present figure, and would be held almost entirely in London, Paris and New York; that some thirty millions sterling of gold held in reserves of banks and Government Treasuries in India could be exported; and that Government would be ready to raise loans in London and other financial centres to continue meeting Reverse Councils, so that a total adverse balance of £100,000,000 could be met whilst still keeping exchange at 2*s.* (2) The sale of Reverse Councils, which locks up money in India, and the export of gold found by the banks, would both automatically contract the circulation in India. A deflation of credit in the large trade centres would gradually occur, though more slowly than in England, and prices in general would fall throughout India. The same automatic compensation would come into action as was described above for England and France and U.S.A. The outflow of currency from India would be bound automatically to bring prices down in India, and sooner or later restore the balance of trade. The only precaution necessary in the case of India is to anticipate this automatic compensation acting more slowly than in the case of Europe; so that Government must be prepared to meet a rather severe and long-continued adverse balance of trade to the extent indicated above.

We have already been experiencing the opposite movement, namely, the inflation of currency, credit and prices in India, due to the influx of currency owing to the favourable balance of trade caused by the rapid rise of world prices during the war. Assuming the precautions above indicated to be taken, I see no reason to believe that the 2*s.* gold rate could not be indefinitely maintained, and confer the benefit of a stable exchange on Indian trade.

APPENDIX XXVI.

Memorandum by Sir V. D. Thackersey, Representative of the Bombay Millowners' Association.

In March 1912 I moved a resolution in the Imperial Legislative Council as an additional Member of that Council, regarding the holding of the Gold Standard Reserve in gold in India and the coining of 10-rupee gold coins. In my speech in support of my resolution I gave my reasons fully, and I attach to this Memorandum extracts from that speech for the information of the members of the Committee. Time has shown that all the evil consequences I anticipated from the Governments currency policy have come too true. I said at that time that in time of war, when gold would be required by all countries, it would not be available for India. We have now seen that not only all the funds of the Gold Standard Reserve have been locked up in England, but nealy 100,000,000*l.* of Paper Currency Reserve and other funds have further been invested in the United Kingdom. This has been the main cause of the difficulties in Indian currency. While America's gold reserve has been increased by five times over pre-war figures, Japan has increased its reserve of gold considerably, and in England itself the

the liquid gold in the Bank of England is several times the amount it had at the outbreak of the war, India has been denuded of all gold. So long as the war lasted, India did its duty in maintaining its gold in England at a heavy sacrifice. It is now England's duty to see that as far as possible a portion of its gold should be released and shipped to India at the earliest possible moment. If Indian reserves had been kept in gold in India, as was suggested, and strongly pressed by Indian public opinion, the present difficulties would not have arisen. There would not have been that large demand for silver in consequence of which the price of silver was raised enormously, and the Government of India were induced to raise the exchange rate from 1*s*. 4. to 2*s*. per rupee, to the serious disadvantage of Indian producers. I cannot help remarking that many of the errors in currency matters arose from the management of these matters from England by the Secretary of State, and the absence of healthy co-operation with the Indian commercial community.

The remedies that I would suggest are as follows :—

1. Gold and silver should be allowed to be freely imported into India on private account, and all present restrictions should be removed. The free import of gold into India should be facilitated by the gradual raising of the official value of gold from Rs. 11. 11, and, as opportunity arises, reducing the exchange from 2*s*. The import of gold into India would to that extent reduce the demand for rupees and silver prices would tend to fall as soon as the Government of India go out of the market as large buyers.

2. The Government should, until the exchanges are restored to their natural level, prohibit the export of gold produced in India and buy it at the current market rate. They should also create facilities for direct import of gold from South Africa, and set up a refinery if necessary. The minting of sovereigns in Bombay, which for some mysterious reason has been suspended, should be forthwith resumed.

3. The Bank of England should release at least 10,000,000*l*. in gold and ship them to India during the next few weeks. This will tend directly and indirectly to ease the exchange situation.

4. The Government should give special facilities to Indian investors for the purchase of Indian sterling debt and also railway securities from England, and guarantee payment of interest on those securities in India at the current rate of exchange. With regard to this, the people of India must be taken fully into confidence through the Indian commercial bodies and by special propaganda work.

5. The import duty on silver in India be abolished and the loss in revenue be recouped by the imposition of additional import duties on general imports. This will not be a hardship on the importers, as they have already got the advantage of 50 per cent. by the raising of exchange.

6. The present method of purchasing silver in England has proved to be disastrous to Indian interests, as it is well known that the silver trade in England is held principally by three or four bullion brokers and merchants, who have succeeded in manipulating the price to the disadvantage of India. The best method is to buy silver at regular intervals in quantities to be fixed long ahead by open tenders to be received in India, perhaps in Bombay, where the dealers from America, England, Mexico, and other silver producing countries may tender. There will not be then any room for unfair manipulation.

7. All the financial transactions of the Government of India should be entrusted to a State Bank to be established in India in the same way as is done in Australia and other self-governing countries. Until that is done the Finance Committee of the Secretary of State's Council should be strengthened by the addition of an Indian member of the commercial class, having full experience and knowledge of finance.

8. The Secretary of State should not sell Council Bills beyond his own need, and all adjustment of balance of trade should be done by the natural process of import or export of specie through the State Bank in India.

9. Care should be taken that the State Bank to be formed in India is not narrow in its construction, that is, on its Board members of Indian commercial communities should be adequately represented, which is not the case with the present Presidency Banks in Bengal and Madras.

10. If the whole of the Currency Reserve and the Gold Standard Reserve is held in India and the State Bank is made to open hundreds of branches throughout the country with the special idea of giving facility for internal exchange and cashing of currency notes, the currency notes would be very much more popular and there would not be that enormous demand for metal which exists at present, mainly owing to want of facility for cashing of currency notes. With the present metal reserve in India it is not possible to give the general facility in every small district, which it would be with all the Indian metal resources held in India. Use of paper money is simply a question of confidence, and if people are convinced that currency notes can be converted into metal currency at any place in India, the demand for metallic currency will be greatly reduced. It is because of this want of facility and want of confidence during the last

three years that the demand for metal has increased, and this confidence was lost in India because the main metallic resources of the Government of India were taken away from India and brought to England.

APPENDIX.

EXTRACTS FROM PROCEEDINGS OF IMPERIAL LEGISLATIVE COUNCIL, DATED 22ND MARCH 1912.

The Honourable Sir Vithaldas Thackersey then moved the further Resolution :—

"That this Council recommends to the Governor General in Council that a substantial portion of the Gold Standard Reserve be held in gold in India."

He said :

"My Lord, this question has been threshed out so often in the past that I will not attempt to weary the Council with any lengthy remarks on this subject. All the Chambers of Commerce have times out of number demanded that our Gold Standard Reserve should be held in gold in India. They have more than once pointed out the danger of either diverting any amount of this to any other purpose or to investing it permanently in gold securities. They have further pointed out that, in case of panic or war, the gold may not be available to us when we badly want it, and in that case it might be difficult, if not absolutely impossible, for India to maintain a Gold Standard. In these days, when the sensitiveness of the money market has become proverbial, it is easily conceivable how great will be the loss that the people of this country would suffer, and to what great extent the prestige of Government would be lessened, if there was the slightest reason to doubt that the gold in the Gold Standard Reserve may not be readily available to maintain the exchange. All the labour of years in creating confidence in the outside world will be lost in a second. And for what purpose is all this risk incurred? My friend the Honourable Sir James Meston, who has always proved himself a capable and sound financier, and whose elevation to the Lieutenant-Governorship of the United Provinces is a matter of deep gratification to all of us, presented last year to this Council what he called the other side of the shield. He said that gold was located in London to simplify the duty of the Government of India in maintaining the gold value of the rupee, as when required to support our exchange it would be immediately available. It had been mentioned moreover, in the reply from the Government of India to the Bombay Chamber of Commerce in May 1907 that holding liquid gold in India would entail loss of interest which we at present earn by investment in gold securities. I will, therefore, with Your Lordship's permission, deal also with this argument. The reply to the first argument is that the location of gold in India will not at all make the duty of the Government of India any more difficult in maintaining the gold value of the rupee. The call on this reserve is made only when it is required for export, and it will be as easy for the Government of India to deliver gold in India to those who want it in exchange for rupees as it is for the Secretary of State to deliver gold in London. If gold is required by the Secretary of State when he cannot sell Council Bills, it can be exported almost immediately. As to the second argument about earning interest, I need only repeat what has been so often and so unanimously said by all the Chambers of Commerce in India and by others who can speak with authority on this subject, that Government are taking a very great risk by this procedure. So long as things move smoothly and no storm breaks, this kind of investment may bring us some income; but it must not be forgotten, as the Bombay Chamber of Commerce wrote to the Government in 1907, that the Gold Standard Reserve is being maintained for the sake of serious emergencies, and that, should such emergencies arise, it might very easily happen that it will be extremely difficult to realise rapidly the securities in England. Indeed, the state of the money market brought about by the very emergency would probably be considerably aggravated if it entailed the realising of a large quantity of British securities, whereas if the reserve was a metallic one the position could be at once relieved. My Lord, India is not the only country which has to maintain a metallic reserve of gold. The United States Treasury has the largest stock of gold held by any country in the world. On 31st December 1910, it amounted to over 233 millions sterling—over eleven times our Gold Standard Reserve. Does the United States Government invest it in gilt-edged securities? In the same way France and Russia have large gold reserves—certainly many times more than our reserve. Why do they not invest them? They rightly realise that their credit and honour and existence stand upon the Gold Reserve, and they know that it may be required at any time in an emergency.

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In addition to our Gold Standard Reserve, the Secretary of State has withdrawn $8\frac{1}{3}$ million pounds of our Paper Currency Reserve and many million pounds more out of our Treasury balances over and above his budget requirements. The cash balances in the hands of the Secretary of State in London in January 1912, amounted to $17\frac{1}{4}$ million pounds sterling, and this year till the 20th instant the Secretary of State has drawn $3\frac{1}{2}$ million pounds in excess of this year's requirements for Home charges, and still we have 10 days to run in this financial

year. What is the object in withdrawing such large amounts from India? In reply to the Honourable Mr. Armstrong's question in Simla in September last inquiring whether much larger cash balances were now held in the Home Treasury than formerly, and if so, the reasons for this, the Honourable Finance Member gave, amongst other explanations, "the heavy sales of Council Bills and telegraphic transfers in excess of the requirements of the Home Treasury." My Lord, this explanation explains nothing. It is only a paraphrase of the question. In busy seasons, while India clamours for money, and while the Bank rate of interest on the security of Government paper goes up to 8 per cent. per annum, while the industry and commerce of the country suffer by the high rate of interest and sometimes find difficulty in getting money at all, the Secretary of State keeps millions and millions of our cash invested by him at a nominal rate of interest with the London bankers and financiers. A more unsatisfactory policy it is difficult to conceive. If even a portion of the amount lying in London had been available with our bankers here, the present stringency of the money market would not have arisen and the commerce and industry of the country would greatly have benefited. Apart from the interests of commerce and industry, which must be dear to us, is it to the interest of Government itself and to the credit of India that such a monetary stringency should be allowed to happen when we have the means of relieving it? Is it to India's credit that on the security of its own promissory notes the holders should have to pay in the busy season a high rate of 8 to 9 per cent. per annum, which is more than double the rate paid by Government? How can we expect under such circumstances that Government paper should be more popular? In England every one, from the Chancellor of the Exchequer down to the humble banker and financier, is seriously concerned about the steps to be taken to make the British Consols more popular. At present that is the principle topic in England. We in India export our available capital to London and starve our banking institutions to the detriment of the popularity of our own paper. If means can be adopted by which we can prevent the enormous rise of the rate of interest in the busy season, I am sure, and that is the opinion of many bankers, that the price of Government paper would stand at a much higher figure than now. Apart from this consideration, we have to bear in mind that this periodical tightness of the money market is a great hindrance to our industrial progress. Violent fluctuations are always to be deprecated. In Great Britain, while the Bank rate varies from 3 per cent. to 5 per cent. in the busy season, a difference of 2 per cent., in India it varies from 3 per cent. to 8 per cent., a difference of 5 per cent. I find from the reply to-day that about $2\frac{1}{2}$ per cent. is average rate of interest with the London financiers.

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"The whole of our Gold Standard Reserve, amounting to nearly 18 million pounds, which is in England is the accumulation of our profits on the coinage of rupees. We have circulated amongst the people a rupee with an intrinsic value of only annas ten, and the balance of annas six is carried to the Gold Standard Reserve. Is this British capital? Then, again, we have about $2\frac{3}{4}$ million pounds of our Paper Currency Reserve invested in England in addition to $5\frac{1}{2}$ millions in gold earmarked for the Paper Currency. Is that British capital? Then, again, the large cash balances of the Secretary of State accumulated by the heavy sales of Council Bills and Telegraphic Transfers in excess of the requirements of the Home Treasury. Is that British capital? I fail to understand the cogency of this argument. If you say that India raises loans for railways in England and therefore you should invest all these funds there, I would ask are the loans raised there on business principles and do those who buy our paper do it as a sort of investment for themselves or are they doing it to oblige us? Do Canada, Australia, South Africa and other British Colonies not raise loans in England? Do they maintain in England a financial house to finance, out of their own surplus money, the London market, or do they use their money for the development of their own country? The same argument applies to the loans raised by other foreign countries in the London market.

"My Lord, if our Gold Standard Reserve is kept in India in gold, we may be able in times of emergency to be of service to the London money market, while under the present policy, in time of emergency we may increase their difficulties by our necessity to withdraw the gold. A big money market like London will not be adversely affected by the gradual withdrawal of gold in normal times, but in times of trouble it may feel the pinch. With our gold in India, London will keep its necessary stock of gold in the usual way, and in times of trouble we can help them with our gold, which will be an extra reserve. So looking from the point of view of England itself, it is an advantage that our gold should remain in India. There is a further advantage if our Gold Reserve is in India. Government have tried to popularise currency notes and meet the wishes of the Commercial communities by making universal currency notes up to the value of Rupees 100. They have not been able to make all currency notes universal because of the difficulty of meeting the demand of coins on presentation. With a large quantity of our gold in India and distributed over all important centres in addition to the Currency Reserve, our power of successfully meeting any demand for coins will be enormously increased. As years pass and people get used more and more to gold coins, it may be possible to make all currency notes universal. It will be an enormous advantage to trade and commerce, and at the same time it will still further popularise paper currency and largely increase its circulation. Those requiring rupees for small business will

get them by tendering gold coins just as they get small change and copper by representation of rupees. Time does not permit me to develop this argument any further, but I hope I have been able to show that it is both to the advantage of India and England that our Gold Standard Reserve should be held in gold in India."

APPENDIX XXVII.

(a) *Memorandum on the Indian Paper Currency Reserve by the Financial Department India Office.*

Prior to 1862 the Presidency Banks had power to issue notes payable on demand, but these were not legal tender and their issue was practically confined to the Presidency towns. The issues were limited to maxima of 2 crores in the cases of the Banks of Bengal and Bombay and of 1 crore in that of the Bank of Madras.

These powers of the Presidency Banks were withdrawn by an Act XIX. of 1861, which created the Indian Paper Currency Department. It took effect from 1st March 1862.

It provided for the issue of notes of not less than Rs. 10 denomination, payable to bearer on demand, against a reserve to be held partly in metallic form and partly in securities.

Denominations and Encashability of Currency Notes.

As stated above, the Act of 1861 only authorised the issue of notes of not less than Rs. 10 denomination. Act III. of 1871 authorised the issue of Rs. 5 notes. Act XIX. of 1917 authorised the issue of R. 1 and Rs. 2½ notes.

The current denominations of notes since January, 1918, have been R. 1, Rs. 2½. Rs. 5, 10, 50, 100, 500, 1,000, and 10,000. Rs. 20 notes were issued up to 1910; the issue of this denomination was then discontinued.

Under the Act of 1861, notes were payable only at offices or agencies of issue at the towns where they were issued or at the Presidency towns of the Presidencies within which they were issued.

The Act of 1882 made notes payable at—

(1) The offices of issue of the towns from which they were issued, and
(2) Except in the case of notes issued in Burma, also at the Presidency town of the Presidency in which they were issued.

Act VI. of 1903 made the 5 rupee note issued elsewhere than in Burma legal tender anywhere in British India except Burma, and payable at any office of issue outside Burma. Act II. of 1909 removed the restriction as to Burma and made the 5 rupee note legal tender throughout British India and encashable at any office of issue in British India. Act II. of 1910 made 10 rupee and 50 rupee notes similarly "universal," and a notification under that Act issued in 1911 extended "universalisation" to the 100-rupee note also. R. 1 and Rs. 2½ notes are also "universal" under Act XIX. of 1917.

Metallic Portion of the Reserve.

The Act of 1861 provided that notes might be issued against (1) current silver coin of the Government of India, or (2) standard silver bullion or foreign coin at the rate of Rs. 979 per 1,000 tolas of standard silver fit for coinage, (3)—under notification of the Government—against gold coin of the Government of India or against foreign gold coin or bullion, and (4) against Government securities to an amount not exceeding Rs. 4 crores. Gold appears in the Reserve for the first time in 1865 when Rs. 20·15 lakhs were held in this form; the quantity had fallen to Rs. 72,520 in 1871, and gold disappeared from the Reserve after 1875. Act VIII. of 1893 authorised the issue of notes against gold or silver coin of the Government of India. A notification of the same date provided for the issue of notes against sovereigns, half-sovereigns, other gold coin and gold bullion.

Act II. of 1898 authorised, as a temporary measure, the issue of notes against gold coin or bullion held by the Secretary of State in London. The authority given by this Act was extended by Act VIII. of 1900 and made permanent by Act IX. of 1902. The Act of 1900 also enabled notes to be issued against silver bullion bought by the Secretary of State for currency purposes, while held by him, or during transit to India. Act II. of 1910 consolidated and amended the law relating to the Paper Currency, and provided in s. 19 for the issue of notes against sovereigns, half-sovereigns, rupees, half-rupees and gold bullion, and "the sum expended in the purchase of the silver bullion and securities," &c. It provided also that coin or

bullion should remain part of the Reserve during transmission by the Secretary of State to the Governor-General in Council or *vice versâ* (s. 21).

Section 19 of the Act of 1910 was temporarily amended for the period of the war and for six months thereafter by Act XIX. of 1917, which authorises the issue of notes against gold coin or bullion held on behalf of the Governor-General in Council by or under the control of the Government of any part of His Majesty's Dominions for coinage or such other temporary purpose.

Act XIII. of 1918 (also temporary) authorised the issue of notes against silver held in the United States of America and against silver in course of transmission from the United States.

Fiduciary Portion of the Reserve.

The limit to the invested portion of the Reserve have been fixed from time to time as follows:—

	Crores of Rupees.		
	Rupee Securities. Total Admissible.	[1] Sterling Securities. Total Admissible.	Combined Total Admissible.
As fixed by Act XIX. of 1861 -	"Government Securities." 4 "Securities of Govt. of India."	—	4
As increased by Act III. of 1871 -	6	—	6
„ „ XV. of 1890 -	8	—	8
„ „ XXI. of 1896 -	10	—	10
„ „ III. of 1905 -	12	2	12
„ „ VII. of 1911 -	14	4	14
„ „ V. of 1915[3] -	20	4	20
„ Ordinance 1 of 1916 -	20	10	20
„ Act IX. of 1916 - -	20	10 6 British Treasury Bills.[2]	26
„ Ordinance 6 of 1916 -	20	10 18 British Treasury Bills.	38
„ „ 7 of 1916 -	20	10 30 British Treasury Bills.	50
„ „ 1917 -	20	10 42 British Treasury Bills.	62
„ Act VI. of 1918 - -	20	10 66 British Treasury Bills.	86
„ „ II. of 1919 - -	20	10* 80 British Treasury Bills.	100*

[1] Defined as "securities of the United Kingdom of Great Britain and Ireland, or securities issued by the Secretary of State for India in Council under the authority of Act of Parliament, and charged on the revenues of India."

[2] *i.e.*, as defined in the Treasury Bills Act of 1877.

[3] All increased powers of investment subsequent to 1911 are enacted only temporarily during the continuance of the war and for a period of six months thereafter.

Percentage of Securities to Note Issue.

In the Bill that was eventually passed as Act XIX. of 1861, it was originally proposed to allow two-thirds of the Reserve against notes to be held in fiduciary form. This was modified, and the invested portion of the Reserve was limited by the Act to securities of a value not exceeding Rs. 4 crores. (For the stages by which this limit was gradually raised to 100 crores,* *see* above table.)

In the early years of the Paper Currency Reserve, the fiduciary portion sometimes formed a very high percentage of the total. At 31st March 1872, the legal limit having been raised to Rs. 6 crores, the percentage of investments to total Reserve was 44·9. Two years later it was 61·5.

The subsequent variations in the percentage borne by the securities held in the Reserve to the gross and net note circulation will be seen from the table on page 155.

The latest figures show an exceedingly high ratio of investments to the total note circulation.

* On 24th September 1919 an Act was passed increasing the combined total admissible to 120 crores and the British Treasury Bills to 100 crores.

TABLE showing figures since 1862 of (*a*) GROSS and (after 1896) (*b*) NET and (*c*) ACTIVE circulation of notes, at various dates, with amounts of Securities held in the Reserve, percentages borne by the Securities to the total Reserve, &c.

(*a*) GROSS CIRCULATION means the total amount of notes issued, equivalent in value to the total amount of the Reserve.
(*b*) NET CIRCULATION means the amount of notes issued, less those held in Reserve Treasuries.[1]
(*c*) ACTIVE CIRCULATION means the amount of notes issued, less those held (1) in Reserve Treasuries, (2) in all other Government Treasuries, and (3) in the head offices of the Presidency Banks.

Year (31st March).	Lakhs of Rupees.							Percentage of Securities to—		Percentage of Silver to gross Note Circulation.	Percentage of Total Metallic Reserve to gross Note Circulation.
	Gross Note Circulation.	Net Circulation.	Active Circulation.	Composition of Reserve				Gross Note Circulation.	Net Note Circulation.		
				Silver.	Gold.	Securities.	Total.				
1862	369	—	—	369	—	—	—	—	—	100	100
1872	1,317	—	—	725	73	591	1,317	44·9	—	55	55·1
1882	1,391	—	—	791	—	600	1,391	43·1	—	56·9	56·9
1892	2,408	—	—	1,608	—	800	2,408	33·2	—	66·8	66·8
1897	2,375	2,286	1,876	1,375	—	1,000	2,375	42·1	43·7	57·9	57·9
1902	3,166	2,641	2,222	1,112	1,054	1,000	3,166	31·6	37·9	35·1	68·4
1903	3,572	3,118	2,481	1,093	1,479	1,000	3,572	28	32·1	30·6	72
1904	3,821	3,375	2,808	1,203	1,618	1,000	3,821	26·2	29·6	31·4	73·8
1905	3,918	3,630	2,846	1,307	1,611	1,000	3,918	25·5	27·5	33·4	74·5
1906	4,466	4,062	3,263	1,635	1,631	1,200	4,466	26·9	29·5	36·6	73·1
1907	4,696	4,364	3,645	1,893	1,603	1,200	4,696	25·6	27·5	40·3	74·4
1908	4,689	4,096	3,261	2,526	963	1,200	4,689	25·6	29·3	53·9	74·4
1909	4,549	4,113	3,495	3,120	229	1,200	4,549	26·4	29·2	68·6	73·6
1910	5,441	4,910	3,998	2,936	1,305	1,200	5,441	22	24·4	54	78
1911	5,499	4,841	4,017	2,614	1,685	1,200	5,499	21·8	24·8	47·7	78·2
1912	6,136	5,617	4,461	1,548	3,188	1,400	6,136	22·8	24·9	25·4	77·2
1913	6,898	5,630	4,732	1,645	3,853	1,400	6,898	20·3	24·9	23·9	79·7
1914	6,612	5,872	4,997	2,053	3,159	1,400	6,612	21·1	23·9	31	78·9
1915	6,163	5,565	4,396	3,234	1,529	1,400	6,163	22·7	25·2	52·5	77·3
1916	6,773	6,413	5,319	2,357	2,416	2,000	6,773	29·1	31·2	34·8	70·9
1917	8,638	8,198	6,708	1,922	1,867	4,849	8,638	56·1	59·1	22·2	43·9
1918	9,979	9,778	8,430	1,079	2,752	6,148	9,979	61·6	62·9	10·8	38·4
1919	15,346	15,007	13,698	3,739	1,749	9,858	15,346	64·2	65·6	24·4	35·8

[1] This is the definition of "net circulation" that has been adopted for many years in the Reports of the Paper Currency Department. But in some of the correspondence on the subject the expression has been used in a different sense, *i.e.*, as meaning Note circulation less notes held in Reserve Treasuries and at the head offices of the Presidency Banks.

Effect of altering the Legal Ratio of Rs. 15 = £1 on the Value of Sterling Securities held in the Paper Currency Reserve.

Sterling Securities held on 15th July 1919.		Equivalent Value.			Difference between Rupee Equivalents.	
Description.	Cost Price.	At 1s. 4d. per Rupee as now converted.	At 1s. 8d. per Rupee.	At 1s. 10d. per Rupee.	At 1s. 4d. and at 1s. 8d. (*Col.* 3 *minus Col.* 4.)	At 1s. 4d. and at 1s. 10d. (*Col.* 3 *minus Col.* 5.)
1.	2.	3.	4.	5.	6.	7.
	£ s. d.	Rs.	Rs.	Rs.	Rs.	Rs.
British Treasury Bills.	54,147,357 4 9	81,22,10,359	64,97,68,287	59,06,98,442	16,24,42,072	22,15,11,917
2½ per cent. Consolidated Stock.	852,395 10 10	1,27,85,933	1,02,28,746	92,98,860	25,57,187	34,87,073
TOTAL -	54,999,752 15 7	82,49,96,292	65,99,97,033	59,99,97,302	16,49,99,259	22,49,98,990

PAPER CURRENCY RESERVE DEPRECIATION FUND.

The idea of creating this Fund arose out of a letter from Mr. Brunyate to Mr. Newmarch dated 18th December 1915, which after referring to the satisfactory conversion of Consols held in the Gold Standard Reserve (3,266,391*l.* 9*s.* 11*d.*) into the War Loan 1925–45, raised questions as to the practicability of a similar conversion of the Consols (3,128,438*l.* 1*s.* 6*d.*) held in the Paper Currency Reserve.

The offer of conversion made in connection with the issue of the 1925–45 Loan had then expired, and it was thought at the India Office to be very unlikely that such an offer would ever be repeated. Moreover, it was considered that if the Consols in the Paper Currency Reserve had been converted on the terms of the offer of 1915, the difference between the price at which War Loan was obtained in exchange for the Consols, and the original purchase price of the Consols, must under the Paper Currency Act have been treated as a loss to the Reserve (of some 600,000*l.* in amount).

But it was suggested that something might be done on a modest scale in the direction of arresting or reducing the depreciation shown in the securities held in the Paper Currency Reserve and at the same time exchanging them for more marketable securities. It was pointed out that the annual profits of the Paper Currency Department would be increased by the additions being made to the invested portion of the Reserve, and it was suggested that some portion of such increased profits should be set aside annually for the purpose.

Correspondence with the Government of India followed, resulting in the decision to set aside in 1916–17 a sum sufficient to enable a certain amount of Consols to be sold, and the proceeds reinvested, without reduction of the Reserve.

The Government of India submitted detailed arrangements. They suggested that annual appropriations towards meeting the depreciation in the holding of Consols in the current and following years should be made, so far as circumstances permitted, to the extent of the difference between the amount received as interest on the Paper Currency Reserve investments and the smaller amount received before those investments were increased as the result of war conditions.

Allocations from revenue would be made, as found convenient, without reference to actual sales of stock, and invested in Treasury Bills until it was found possible to sell the required quantity of stock. The special account to be opened for the purpose would be designated "The Paper Currency Reserve Depreciation Fund." On the sale of any portion of the Consols, the proceeds would be devoted to the purchase of Treasury Bills for the Paper Currency, and the difference between the purchase value of the stock and its sale price would be made good from the Depreciation Fund.

These arrangements were approved.

In order to constitute the Depreciation Fund the following sums were appropriated from the Revenue Head "Interest—Paper Currency Investment":—

	£	s.	d.
In 1916–17	399,080	8	0
In 1917–18	450,000	0	0
	849,080	8	0
Add—Discount and interest received on investments	42,253	0	8
	891,333	8	8
Deduct—Transfers to Paper Currency Reserve Investments to replace losses on sales of Consols	608,238	4	0
Balance 30th June 1919	283,095	4	8

The balance of 283,095*l.* 4*s.* 8*d.* is not at the present time sufficient to meet the loss which would be incurred if 1,000,000*l.* Consols were sold at their existing low price of 52–53, but interest on the securities held accumulates at the rate of about 15,000*l.* per annum. In view of the decision arrived at in October 1918 not to sell Consols at the price then current (61½–62½), but to wait if necessary a considerable period for a marked rise in price, it has not been considered necessary to make further appropriations from Revenue.

Consols have been realised from time to time as follows:—

Date of Sale.	Stock.			Cost.			Net Amount realised.			Loss replaced from Depreciation Fund.		
	£	s.	d.	£	s.	d.	£	s.	d.	£	s.	d.
May 10, 1917	50,000	0	0	42,619	15	6	27,717	15	0	14,902	0	6
15 „	50,000	0	0	42,619	15	6	27,717	15	0	14,902	0	6
July 20 „	200,000	0	0	170,479	2	2	111,623	0	0	58,856	2	2
Oct. 15 „	100,000	0	0	85,239	11	1	56,061	10	0	29,178	1	1
22 „	100,000	0	0	85,239	11	1	56,186	10	0	29,053	1	1
May 13, 1918	150,000	0	0	127,859	6	8	83,966	19	0	43,892	7	8
16 „	50,000	0	0	42,619	15	7	28,030	5	0	14,589	10	7
21 „	50,000	0	0	42,619	15	6	28,092	15	0	14,527	0	6
23 „	50,000	0	0	42,619	15	7	28,092	15	0	14,527	0	7
27 „	50,000	0	0	42,619	15	6	28,155	5	0	14,464	10	6
June 10 „	65,000	0	0	55,405	14	3	36,439	12	6	18,966	1	9
21 „	35,000	0	0	29,833	16	10	19,620	19	6	10,212	17	4
July 23 „	25,000	0	0	21,309	17	9	14,046	3	6	7,263	14	3
29 „	75,000	0	0	63,929	13	4	42,138	18	6	21,790	14	10
Aug. 1 „	100,000	0	0	85,239	11	1	56,311	10	0	28,928	1	1
2 „	100,000	0	0	85,239	11	1	56,436	10	0	28,803	1	1
6 „	100,000	0	0	85,239	11	1	56,561	10	0	28,678	1	1
12 „	100,000	0	0	85,239	11	1	56,686	10	0	28,553	1	1
15 „	25,000	0	0	21,309	17	9	14,202	8	6	7,107	9	3
19 „	75,000	0	0	63,929	13	4	42,608	7	6	21,321	5	10
30 „	50,000	0	0	42,619	15	7	28,467	15	0	14,152	0	7
Sept. 2 „	150,000	0	0	127,859	6	7	85,529	5	0	42,330	1	7
5 „	25,000	0	0	21,309	17	10	14,296	3	6	7,013	14	4
9 „	75,000	0	0	63,929	13	3	42,889	12	6	21,040	0	9
16 „	50,000	0	0	42,619	15	7	29,280	5	0	13,339	10	7
Oct. 2 „	100,000	0	0	85,239	11	1	58,748	0	0	26,491	11	1
3 „	128,438	1	6	109,480	0	10	76,124	18	6	33,355	2	4
	2,128,438	1	6	1,814,271	2	6	1,206,032	18	6	608,238	4	0
Amount held 30 June 1919	1,000,000	0	0	852,395	10	10	—			—		

Composition of Depreciation Fund, June 30th, 1919.

270,200*l.* 6 per cent. Exchequer Bonds redeemable 16th February 1920. 8,000*l.* Treasury Bills maturing 22nd November 1919. 347*l.* 4*s.* 7*d.* balance awaiting investment.

16th July 1919.

(b) Telegraphic Correspondence between Secretary of State and Government of India on the subject of the Indian Paper Currency Reserve.

From Secretary of State to Government of India, 22nd September 1919.

1. Please see note against item 24 in third enclosure of your Despatch dated 14th April 1919, No. 108, also para. 4 of my telegram dated 10th September. Hitherto I have refrained from raising questions there mentioned because use of so-called gain by exchange for revenue and for the contemplated second war contribution (*see* Meyer's speech in Indian Legislative Council, dated 9th September 1918, and para. 23 of Meston's narrative introducing Financial Statement for 1919–20), seemed to me justified by exigencies of war period. I shall, however, be glad if you will now consider and report in detail as soon as convenient your proposals as to (*a*) utilisation of so-called gain by exchange so long as Government accounts are kept on basis of 1*s.* 4*d.* per rupee; (*b*) method of making good the deficit which will appear in Paper Currency Reserve if and when Government accounts are recast on basis of higher rate. As indicated in enclosure to your Despatch dated 14th April, the two questions are closely connected.

2. In view of the large deficit which may have to be faced in Paper Currency Reserve, it would seem best from point of view of currency that, with effect from 1st April 1919, except in so far as this year's Budget anticipations may have otherwise provided, all gain by exchange realised while accounts are kept on present basis and all similar advantage subsequently accruing, though not under that designation, should be regarded as not available for use as ordinary revenue, but reserved for the two following purposes, viz.:— (*a*) meeting the immediate charge which will have to be borne whenever any of the sterling portion of the reserve is remitted to India by sale of reverse drafts or by payments from the sterling portion for silver for India; (*b*) ultimate appropriation to the Paper Currency Reserve so as to restore the loss which will be shown by revaluation. The distinction between these two purposes will, I hope, be clear to you. The first would require a very large sum if in any particular year heavy sales of reverse drafts were met from the Paper Currency Reserve. For example, 20 millions now stand in the Reserve as the equivalent of 30 crores, but, with the rupee at 2*s.*, would meet drafts for only 20 crores. It is necessary to consider how to provide from gain on exchange towards defraying a possible shortage of this kind. The second purpose is of a different nature, and could be served by making uniform annual appropriations over a series of years.

3. In submitting your recommendations, you must have both purposes in mind. You must also consider whether action should be as thorough-going as suggested at beginning of para. 2, or needs of Paper Currency Reserve should be satisfied more gradually so as to allow to revenue, which will in the near future be burdened with some heavy new charges, a portion of the advantage from the higher value of the rupee or to let some of it go towards reduction of debt. Since, in the absence of need for making good the deficit in the Paper Currency Reserve, the whole advantage would legitimately go to revenue, I recognise that there is room for difference of opinion as to whether revenue should sacrifice it entirely to Paper Currency Reserve in each of the next few years or should do so only in part.

4. If you can submit your considered recommendations soon enough, it may perhaps be well to lay them before the Currency Committee.

From Government of India to Secretary of State, 10th October 1919.

Your telegram of the 22nd ultimo. Writing down of sterling liabilities, treatment of gain by exchange, &c.

1. As a preliminary point we may mention that our Comptroller-General has just represented to us inaccuracy in present conditions of not giving railway capital transactions the benefit of gain by exchange and unsuitability in present circumstances of decision arrived at in 1915—*vide* your telegram of 9th February 1915—of applying uniform rate of 1*s.* 4*d.* to such transactions among others. We are examining this point separately, and shall send you our detailed recommendations in due course. But, as the amount involved is considerable, and will substantially affect the figure to be credited as gained by exchange, we mention the matter here as one which may have to be taken into account in estimating amount of gain by exchange available for the purposes contemplated by you, and you will understand our recommendations below are subject to decision on that point.

2. Described further important point which has emerged into that referred to in para. 2 (*c*) of our telegram of to-day regarding solution of currency problem, namely, fact that from outset of new settlements with provinces it may be essential to reduce all-India deficit, this meaning that a smaller portion of revenue now arising from gain by exchange which will in future be represented by reduced home charges will be available for the purpose of writing down our currency holdings, whether in form of Treasury Bills or gold. We hope to submit before long detailed report on our examination of provincial surpluses, but it is difficult to estimate

at this period of time, before new settlements actually come into force, the extent to which it will be necessary to alienate a portion of such revenue resources in connection with initial settlements.

3. Subject to above complications we entirely welcome general lines on which you contemplate approaching question. Our idea during period before new settlements with provinces come into force would be to allocate toward writing off capital loss on our sterling holdings in so far as your Ways and Means position permits all receipts at present credited as gain by exchange whether *eo nomine* while 1*s*. 4*d*. basis persists, or their equivalent when we recast our accounts on 2*s*. basis of exchange.

4. We may hope that above immediate allocations will go a long way towards making good the deficiency. On principle it would be legitimate and justifiable to continue to pursue same course until whole of the deficiency is written off, but later on, when a large part of our gain by exchange becomes merged or concealed in our ordinary revenues being represented by decrease in home charges, it may be much more difficult to justify its application by this particular method since, for example, representations will then almost certainly be received from provinces that we are retaining an unnecessarily large Government of India deficit. At that stage a possibly preferable alternative might be instead making a lump allocation from our general revenues to definitely earmark for the purpose of writing off depreciation (*a*) all the profits from the Paper Currency Reserve investments *plus* (*b*) any gain on exchange which may be realised over and above the real 2*s*. parity if the solution recommended in our telegram of to-day on that subject be adopted. Simultaneously with this, we should obviously be justified as a separate matter in setting aside annually an adequate sum towards the reduction of floating and short-debt.

5. We appreciate distinction made in para. 2 of your telegram between two purposes (*a*) and (*b*) there specified, but in actual practice we are not quite sure whether problem cannot be more conveniently and satisfactorily approached on general lines such as those above indicated. For example, the possible difficulty mentioned by you arising from our having to make in a particular year heavy sales of reverse drafts from Paper Currency Reserve might well be met by taking these drafts against Gold Standard Reserve which was constituted and built up for that definite purpose. Similarly as regards silver purchases. As a matter of fact, you usually meet these from your Treasury and on hypothesis that large purchases of silver are necessary for coinage this pre-supposes strong demand for Councils which would mean that you would almost certainly have ample Treasury resources available. In either case it should be possible to break by these methods the back of any specially large drain on the Paper Currency Reserve.

APPENDIX XXVIII.

Memorandum received from the Government of India regarding Indian price movements, Covering Letter from Director of Statistics to the Government of India, Finance Department, dated 16th August 1919 and statistics annexed thereto.

1. The comparative statement of price movements in India during the last ten years asked for by the Currency Committee has been prepared by the Director of Statistics and is attached hereto.[1] As desired by the Committee, the articles selected have been classified under the following categories:—

(1) Indian produce for which large markets are found outside India—
  (*a*) in competition with similar produce from other countries;
  (*b*) under non-competitive conditions.
(2) Indian produce for which the main markets are inside India.
(3) Commodities imported into India from outside.

In this Memorandum a brief explanation is given of—
(*a*) the basis upon which the figures have been compiled; and
(*b*) the classification of the various articles among the four categories mentioned in the Secretary of State's telegram of 31st July.*

* *Telegram to Viceroy dated* 31 *July* 1919.

Currency Committee desire to receive, as soon as possible, brief comparative statement on price movements in India during last ten years. They are particularly concerned with what is understood to be marked increase during period of war and with question as to how far effect of rising exchange has tended to keep Indian prices down, and to prevent them from rising to full extent in sympathy with rise in world prices. It might be convenient if return dealt with commodities under categories of—

(1) Indian produce, for which large markets are found outside India—
  (*a*) in competition with similar produce from other countries;
  (*b*) under non-competitive conditions.
(2) Indian produce for which main markets are inside India.
(3) Commodities imported into India from outside.

I shall be glad if you will arrange for preparation of Report and despatch of 50 copies so as to reach here by end of September.

[1] *See* pages 167 to 176.

Since the Secretary of State has intimated that the Committee are particularly concerned with the effect of currency and exchange factors upon prices in India, it has been thought desirable to take the opportunity to add some general observations upon certain points to which consideration must be given before any deductions are based on the statistics contained in the tables, namely—

(*c*) certain factors which have tended in the case of India to obscure the effect upon prices of currency and exchange influences;

(*d*) the general effect of external price levels upon internal price levels; and

(*e*) the general effect of the rate of exchange upon India's export and import trade.

Basis of compilation.

2. (1) For the reasons given by the Director of Statistics in his forwarding letter of the 16th August, the annual average from 1900–1909 has been taken as the base for the purpose of the percentages given in the tables.

(2) The prices are in all cases wholesale, and are based on the average price prevailing in January and July of each year.

(3) A detailed description of the articles selected and the markets for which prices have been quoted are given in the appendix to the tables.

Classification.

3. As regards the classification of the selected articles among the four categories in question, it is possible that the Currency Committee have had principally in mind the economic effect of high internal prices upon the people at large, or it is possible that they were also thinking of the effect of a rising or high exchange upon the export and import trades respectively. The classification must obviously vary with whichever of these two points of view is adopted; in any case the four groups would appear to overlap. The method actually adopted is that, where the foreign demand for any article is the main factor in determining the internal price, it has been included under 1 (*a*) or 1 (*b*); where, however, the export is not sufficiently large to exercise any substantial influence upon the internal price, it has been included under 2. As between 1 (*a*) and 1 (*b*), a rigid application of the monopoly criterion would leave very few articles under the latter. Thus, tea is an article of export which certainly competes with Ceylon and Java teas in the European markets; at the same time it is open to doubt whether the factor of exchange has any permanent determining influence upon the actual volume of exports. At the present time it is particularly difficult to draw a clear line between these categories, owing to the intense demand for raw material from India, and to the fact that many articles, which in normal times might compete in European markets with similar articles from other countries, are in deficient supply at present in Europe, and the experience of the past few months has shown that in nearly every case the successive rises in exchange have been passed on to the foreign consumer.

It is arguable whether raw and tanned hides and skins and tea should fall under 1 (*a*) or 1 (*b*), and whether castor-seed should not be transferred from 1 (*a*) to 1 (*b*).

Certain obscuring factors.

4. It may be said at the outset that so many obscuring factors have been in operation during the war that it is very doubtful whether any generalisation as to the operation of currency and exchange factors can be safely based on comparisons made between the statistics given in the tables and any similar statistics for the United Kingdom.

One important factor of the kind is the control exercised over the export of food grains, of which one or two concrete examples may be given. As is known, the export of rice is prohibited except under control. There is a great difference between the prices in London and Rangoon. Brokens No. 3 were recently quoted in London at 39*s*. per cwt. while the maximum controlled price for the most expensive quality of brokens in Rangoon was at the same time the equivalent of 11*s*. per cwt. Similarly, the Government of India were informed in a recent letter from the Governor of Ceylon that as much as 60*l*. a ton was being paid for rice imported into that Colony from Siam, whereas rice exported from Burma at controlled rates could at the time be landed in Ceylon at less than 14*l*. a ton. It is clear that the difference between the internal Indian price of rice as the result of control and the external price is far greater than could be accounted for by any difference in exchange and that no deduction on the point at issue could legitimately be drawn from the statistics for this important commodity.

Again, during recent months the price of wheat in India has, as the result of purely internal causes, namely scarcity, risen above the Australian parity, with the unprecedented result that wheat could profitably be imported from Australia into India. Although, therefore, this importation of Australian wheat may have been facilitated by a rising exchange, it would here again be quite unsafe to say definitely that this was the case. The above examples show how the possible effect of a rise in exchange has been obscured in the case of two controlled articles, the obscuring factor in the former case, namely, rice, being the actual control over export, and in the latter case special circumstances, namely, scarcity within India.

Apart, however, from control over export of food grains from India, numerous other obscuring factors have operated. It is unnecessary to elaborate these, though a few of them may be briefly mentioned, namely, control of finance, special preference being given to exports of war importance; freight difficulties, leading to similar control over freight, with definite

restrictions on certain other exports, for example hides and skins. As an instance of the effect of finance and freight difficulties may be cited the case of coffee, the Indian price of which, owing to the difficulties of export, was actually lower in 1918 than before the war. On the other side, there has been a special demand for certain of India's commodities which some of the belligerent countries have had to obtain at any price, for example, castor-seed for lubricating oil for aeroplanes.

Extent and effect of increase in Indian prices.

5. It will be observed from the statements that the rise in rupee prices in India for all commodities, including the necessities of life, has been of the most serious character. In the case of food-grains, (*viz.*, wheat, country rice, the millets, gram, maize and *dál*) the prices generally have risen by an average of 93 per cent. since the commencement of the war, while the increase under piece goods is 187½ per cent. (imported) and 61½ per cent. (Indian made). The effect has of course been felt most directly by the poorer classes, but it has reacted on all sections of the community. Complaints on the subject have been universal throughout the country, and it is reported from the districts that in recent months the topic of high prices has engaged the minds of the people at large to the exclusion of every other; they could understand dearness during the war, but cannot understand why prices do not fall now that the war is over; they can account for some of the rise in the price of food-grains by last year's poor monsoon, but they are puzzled by large increases in the prices of their other necessities of life the supply of which is not dependent on a good rainfall. There is no longer any room for doubt that the resultant increase in the expense of living due to the high prices of food-grains as also of other necessaries, such as cloth, kerosine oil, and the hardships which this increase has entailed on the poorer classes and those on fixed incomes, have been a very important factor in promoting unrest and discontent. At the same time the cultivator, who would ordinarily be the first to profit by the high prices of produce, whether food-grains or other raw material such as jute and cotton, has seen his profits disappear owing to the simultaneous rise in the price of other necessities.' The wages of manual labour have no doubt been to some extent re-adjusted, and ultimately the wages of the clerical and other classes of employés will undergo a similar readjustment. But the process of adjustment, however rapid, must inevitably be a painful one which no amount of administrative palliatives, such as control of distribution, can alleviate.

Special case of food-grain prices.

6. In recent months the position in India as regards food-grains has been especially acute. In the earlier period of the war, India was fortunately favoured by good monsoons, but in 1918 there was a very serious and widespread failure of the rains, and stocks in India in recent months have been perilously low, for though the autumn crop failure was less severe than has been known in special localities in the past, it was unprecedented in its extent.

Impracticability of restriction on export of food-grains as permanent measure.

7. In the case of individual commodities, their prices may, it is true, be temporarily divorced from their world prices, *e.g.*, by control over export as in the case of food-grains. It is, however, clear that such control or restrictions, even if regard be had to Indian interests only, can be at best of a temporary character. Take, for example, the case of food-grains. It is no doubt true that their present high prices will encourage production and that with a good monsoon the Indian food-grain prices will fall, though in present circumstances this fall would almost certainly not be to the neighbourhood of the pre-war level. Should, however, the prohibition on export be indefinitely continued, a stage must inevitably be reached at which it will become more profitable for a cultivator to grow other crops on the export of which there is no prohibition and for which there is a strong external demand at high prices; for example, jute in place of rice in Eastern Bengal, or linseed or cotton in place of other food-grains in Northern India. One of the great safeguards in India against scarcity in normal circumstances is the large margin of food crops grown in excess of internal requirements as the result of the external demand for them. As a result, in famine years, when there is a failure of the crops in some areas, the margin grown for export is available for internal consumption. With a permanent prohibition on export, this safety margin would be eliminated, with results which can only be described as disastrous.

Effect of high rupee prices on the Government finances.

8. The serious effect of a rise in the prices of necessities is by no means limited to the immediate hardship, unrest and discontent referred to above. From the point of view of the Government finances, it has been necessary, as a direct result of the increased cost of living, to effect practically a general enhancement of the pay of Government servants of all classes from the menials at the bottom to the regular services at the top. These enhancements of pay are making a very embarrassing inroad on the resources of the State and are absorbing funds which are urgently needed for the various measures of progress and development which are now on the anvil. There can be no doubt that an upward movement in prices in India will, if continued, inevitably entail large increases of taxation both by the Central and Provincial Governments merely to meet the current expenses of carrying on the administration, and will consequently tend to retard India's development in many directions, apart from the undesirable effects of the general unsettlement which inevitably follows in the train of rising prices.

General causes of present high world-prices.

9. The rise in prices during the war and even after the close of hostilities has not of course been confined to India. It is believed that there is a general consensus of opinion as to the causes mainly responsible for the rise which has taken place in all the belligerent countries and that these have been, briefly, (*a*) intense competition by all the belligerent countries for commodities of all kinds for the maintenance and supply of their armies; (*b*) concurrent diversion of huge numbers of those engaged in production to the armies and supply services; (*c*) simultaneous creation of a huge additional volume of credit and currency to finance the prosecution of the war; and further consequently (*d*) enhanced cost of production of practically all classes of commodities. In other words, there has been a very large increase in the demand for most of the necessities of life together with a curtailment of the supply. The phenomenal increase in the price levels which has been the natural result has been facilitated, and even stimulated, by the great depreciation of currency following on the methods adopted in practically all important countries in order to finance war requirements. The process of depreciation has further been accelerated by the demands of labour—high prices being made a basis of claims for an increase of wages, while the enhanced cost of production due to the latter has, in its turn, in a vicious spiral again resulted in still higher prices. In the United Kingdom, though most people recognise the imperative necessity of tackling the problem, and the Chancellor of the Exchequer has on more than one occasion emphasised its importance, all the indications at present seem to point to the conclusion that a recovery can at best only be gradual and that matters may possibly get worse before they get better.

Direct effect of external high prices on Indian prices.

10. Though in India the actual rise in prices has been very serious, it has been less considerable than in other important countries. There is little doubt that in India the causes mentioned above have been in operation, though to a much less acute degree. Even had this not been the case, the generally accepted teaching of the economists would have led us to expect that India could not remain unaffected by the general upheaval in price levels which has taken place throughout the whole civilised world. The rise in the prices of commodities elsewhere, coupled with an intense demand for the commodities which India can supply, must of itself have operated very directly to cause a corresponding rise of prices in India. Such rise, moreover, cannot be restricted to articles which are the subject of external trade, since the inter-relation of prices of various commodities, though complex, is necessarily close and the prices of individual commodities cannot be separated off into watertight compartments.

Reaction of external high prices on the internal currency of a country.

11. We are warned, however, by controversies in the past that it is never practicable to assess with any exactitude the relative effect of the various factors responsible for the rise of prices in any particular country and, even were such determination otherwise feasible, the various measures of control adopted over exchange and the production and movement of commodities have, as already stated, necessarily tended so to obscure the operation of ordinary economic causes as to render profitless an attempt at any confident assessment of the relative weight to be assigned to the various factors in the rise of prices in India. It is, however, thought that certain general deductions can be drawn on *a priori* grounds. In drawing these deductions it has not been considered necessary to discuss at length the principles formulated by well-known economists in the past and generally accepted. Though these authorities have not, it is believed, dealt with some of the individual questions and difficulties which have arisen in connection with the operations of the gold exchange standard, where the intrinsic value of the silver rupee, which has been linked on to the pound sterling, has risen above its par value at the rate of exchange adopted, the principles to be applied in considering the effect of external prices on silver prices in India under a gold exchange standard do not appear to differ from those which would have governed the position had her standard been a complete gold standard or a purely silver standard. The direct effect of external prices on Indian prices on the assumption of a stable exchange standard has just been mentioned. To develop a little further the effect of external price levels on the internal currency of a country,— if the external prices of the commodities which it ordinarily imports are higher than the internal prices, the natural tendency, assuming fixed exchange rates between it and external countries, will be for it to increase its exports and to curtail its imports, thus increasing the net inward remittances of funds required to settle the balance of trade in its favour. It can naturally be expected that this process will continue until a price equilibrium has been established. Assuming a free movement of the precious metals, in the simplest case gold would flow into the country to adjust the trade balance, and the internal currency of the country would be increased until its volume was adjusted to the resultant higher level of internal prices. In other words, in so far as the increase of currency comes about in this way the process can be summed up by the paradox that the amount of money required in a country is determined by the general level of prices in countries outside it. In the simplest class of case, therefore, in which external prices react on internal prices it may be said that there are two clear aspects of the question, namely (to take the case where external prices have risen above the level of internal prices), (1) the direct effect of external price levels in causing a rise in the internal price level, and (2) the effect of the influx of gold in increasing

the volume of the internal currency till it is adjusted to the increased value of internal transactions at the higher price level reached.[1] Though there are further complications in India's case to which reference will shortly be made, it would not be an unjustifiable assumption that, apart from any other factors, the great rise which has taken place in prices outside India must of itself have operated to enhance price levels in India, thereby necessitating an increase in the amount of currency required in that country.

Effect of external restrictions on the movements of the precious metals on the exchange.

12. Before, however, dealing with these complications, the simple case may be pursued rather further, it being further assumed that some external control is imposed on the import of gold into the country in whose favour the balance of trade is running. In that event it is thought that the position which would then arise must necessarily be as follows: Inasmuch as the demand for remittance of funds to the country under consideration is greater than the demand for remittances therefrom, the established rate of exchange must break away, the rate in favour of the country rising. With the rise in exchange the prices which the country's customers would be prepared to pay for her exports will, when translated into the internal currency, represent a smaller amount of the latter; and to sum up the matter, the tendency must be to reduce the volume of the country's exports, and conversely to increase that of its imports (or in other words to use a phrase in common parlance, "to break the balance of trade") until equilibrium of exchange is again established at some higher level.

And of consequent fluctuations in exchange on internal prices.

This establishment of the exchange rate at a new equilibrium will at the same time have an important further effect as it will result, to use a metaphor, in a change of gear between the internal and external price levels. It is, it is believed, generally accepted that in normal conditions the extent to which the internal prices of a country are affected by an increase in external prices must depend upon the ratio at which such external prices are brought into relation with internal prices: in other words, on the rate of exchange. If the above assumptions are correct, it follows that a great disparity between external and internal price levels can only be adjusted in one of the following ways: either (1) by a great increase in the volume of the internal currency, the rate of exchange remaining constant, which will result in internal prices moving up to the level of external prices; or (2) by a breakaway in exchange, which will enable the same volume of internal currency to do the same amount of work as it did when external prices were at a lower level; or (3) as has been the case in India, a combination of (1) and (2).

Operation of factors discussed above in causing a rise in the sterling value of the rupee.

13. It is now necessary to consider certain special conditions attaching to the case of India during the war. Though throughout the war drastic restrictions were placed on the movements of gold by belligerent countries, it might be suggested that this would not necessarily preclude the import of funds into India. As is known, the Secretary of State ordinarily endeavours to meet the requirements of trade in respect of the balance of remittances necessary to settle India's international account by selling remittances on India in the shape of his Councils. This is only possible so long as he has funds in India to meet these drawings. But he is able to go on placing funds in India only so long as he can purchase silver for import into India and coinage into rupees at a price not above their cost price. Towards the end of 1916 the demand for remittances to India became so intense that the Secretary of State was compelled (in the circumstances explained in paragraphs 5 and 6 of the statement of the case submitted to the Currency Committee on behalf of the Government of India) to restrict the amount of his drawings. The natural effect of such restriction, on the assumptions made above, would have been to cause the rate of exchange to break away from the established par of 1*s.* 4*d.* to the rupee. Owing to the institution of control, however, an immediate breakaway was avoided, though a fractional enhancement was made in the rate. The nature of the control then instituted is briefly described in paragraph 6 of the statement of case just referred to. But though an actual break in the exchange rate did not occur at the time, certain factors were in operation, the natural effect of which would be to tend to retard the rise which otherwise might have been expected to occur in the prices of various commodities produced in India, and consequently a general rise in internal prices corresponding to those prevailing elsewhere. Among these factors were control arrangements which included preferential treatment in the finance of exports of war importance, the difficulties arising from scarcity of freight, and the restrictions imposed on other grounds on the export of various commodities. It is probable that the serious rise in internal prices subsequently experienced would in its earlier stages have been even more rapid but for these factors. The actual break in exchange came later, namely, in August 1917, when owing to the large purchases of silver effected by the Secretary of State concurrently with the competing demands of other countries a point was reached at which the exchange value of the rupee was less than its silver content, and there was consequently a premium on its export. In other words, it then became necessary to break definitely away from the established 1*s.* 4*d.* ratio to 1*s.* 5*d.*, and for similar reasons subsequent enhancements in the exchange rate became necessary from time to time.

[1] The remarks under (2) need qualification in their application to India at the present time in so far as imports of funds in the form of gold are concerned, seeing that owing to the present large premium on gold it cannot perform any currency function.

14. Incidentally it may be remarked here that in the present connection it is unnecessary to differentiate between the transactions classified as India's private trade and those undertaken by the Indian Government direct on behalf of the Home Government. As is known, it was necessary for the Government of India to incur a very large amount of expenditure in India and elsewhere on behalf of the latter against which repayment was made in London. Though the Government of India had to provide for the finance of this expenditure in India and to create a substantial additional amount of currency for the purpose, the transactions involved do not for the present purpose differ essentially in character from the facilities afforded by the Government of India through the Secretary of State's Council Bills for the finance of the balance of private trade. In the result, while there can be no doubt that the huge volume of currency added to the circulation materially facilitated the rise in prices, it is impossible to speak at all confidently on the relation by way of cause and effect between the expansion which has taken place in the currency and the rise of internal prices in India. Thus, it is possible that the latter would independently have necessitated a considerable expansion of the currency even had the Government of India not been forced by war exigencies to make very large additions to the rupee and note circulation, even before the stage was reached at which exchange was strained to breaking point; while on the other hand such additions to the currency necessarily in their turn facilitated a rise in prices, thus working in a vicious circle, since higher prices for the necessaries of life necessarily lead to higher wages and increased cost of production, these again tending to necessitate further additions to the currency. The most that can be said with any approach to confidence is that, had the Secretary of State and the Government of India entirely stood aside, the Secretary of State merely selling Council bills up to the limit of his requirements, and leaving all transactions by private agency and India's balance of trade to adjust themselves, exchange must inevitably have broken away wildly from the 1*s.* 4*d.* standard at an even earlier date, and quite possibly might have reached even higher levels than it has actually done. This, however, would have involved serious dislocation of trade at a critical period of the war, when it was essential to ensure the financing of commodities very urgently needed by the Allies for its prosecution.

Effect of heavy disbursements made by the Government of India on behalf of the Home Government.

Similarly as regards the effect on prices of the course actually pursued by Government in its currency and exchange operations, it is probable that while on the one hand during the continuance of the artificial maintenance of the 1*s.* 4*d.* rate a rise in internal prices was retarded in its earlier stages by difficulties of freight, restrictions on export, &c., on the other hand, had exchange been allowed to run loose in the manner just outlined, rupee prices would in effect not have risen to anything like the heights that they have actually reached. If this view be correct, it follows that the linking of the rupee on to a depreciating sterling standard has been an important element in the reduction of its purchasing value, and that this has consequently been in part responsible for the economic and social effects referred to in paragraph 5 above.

15. In the course of the above remarks the effect of a high or low exchange on the internal price levels of the country has been discussed. A separate aspect of the question has, however, often been raised, namely, the effect of a high or low exchange or of a rising or falling exchange on a country's external trade. This matter was incidentally touched on at the end of paragraph 17 of the Statement of Case submitted to the Currency Committee on behalf of the Government of India. It is probably not necessary to refer to it at any length, as it was authoritatively considered by the Herschell Committee—*vide* in particular paragraphs 27 and 116-120 of the Report of the Indian Currency Committee of 1893. A brief reference to the subject may, however, be made as it is one which has recently received some public notice. If the correctness be admitted of the general deductions drawn in the previous paragraphs of this Memorandum, it would seem that a clear distinction must be drawn between the effects of a rising or falling exchange and those of a high or low exchange. Other things being equal, and neglecting monopoly or quasi-monopoly trades, a rising exchange admittedly tends temporarily to stimulate imports and to check exports, and a falling exchange to stimulate exports and to check imports. These processes might be expected to continue for some time until equilibrium in the exchange rate had been established and until the various adjustments in internal prices and wages had been effected. It does not, however, by any means seem to follow that, under a fixed high exchange, exports would necessarily be prejudicially affected, or that with a fixed low exchange the converse would be the case. It would seem to be a legitimate assumption that, other things being equal, with a high exchange internal prices generally will be lower and consequently as a result the cost of living and the cost of production will also be lower than with a lower exchange rate. For example, to take two of India's exports in respect of which the prejudicial effects of a high rate of exchange have been advanced in the past: the cotton mills will, with a higher rate of exchange, obtain less for their yarn and piece-goods; they will on the other hand pay less for their imported machinery, less for their cotton and less for their labour if exchange were lower. The labourer in his turn, while receiving less wages, will pay less for his food and clothing; while the grower of cotton will receive less for his cotton

Effect of high exchange on export and import trade.

and pay less for his food and clothing; and the grower of food crops will receive less for his crops and pay less for his clothing and other necessaries. Similarly with tea. While the tea companies with a higher rate of exchange may receive a lower rupee price for their product, they can expect that this will be set off by their having to pay a lower living wage for their labour than would otherwise be necessary. It is in the nature of the case not possible to assess quantitatively the net effect of these various factors, but the experience both of the cotton mill and tea industries, after the gloomy prognostications in the nineties of the last century, seems to cut away the ground from the argument that a high exchange will *per se* prejudice India's export trade, while on the other side many countries are to-day finding to their cost that a lower exchange merely means a relatively more depreciated currency, higher wages for dissatisfied labour and restricted production which do not conduce to a flourishing export business. It is probably unnecessary to labour the point by numerous examples or by referring to extreme cases, such as that of the depreciated rouble. But it has been stated apparently on good authority that at the present moment it is possible, with the New York exchange strongly against London, for the United States to place in the United Kingdom their steel manufactures at a price considerably below the cost of production of similar materials in the United Kingdom, and this is doubtless only one example among many.

Letter from Director of Statistics to the Secretary to the Government of India, Finance Department, dated 16th August 1919.

SIR,

I HAVE the honour to submit a series of tables[1] showing the fluctuations in Indian wholesale prices from 1900 which have been prepared in connection with the investigations of Sir Henry Babington Smith's Currency Committee.

2. The tables have been grouped as follows:—One series deals with the prices of country produce consumed and exported, while the other series deals with imported commodities. These quotations are wholesale price quotations and have been compiled on one uniform basis, *viz.*, the average price prevailing in January and July of each year. A list of the commodities and markets selected and the sources of the quotations form an Appendix. The actual prices of commodities together with index numbers have been set out in the tables. The basic period is the first ten years of the period, *viz.*, 1900 to 1909. A decennial average as a base for the index numbers was, on the whole, the most suitable standard. It was not possible to select the first or the first few years of the period as these were abnormal. The year 1900 was a famine year and the immediately succeeding years were also abnormal. The year 1904–05 marks a new period in Indian price levels, since up to 1904 internal conditions were on the whole the chief factors determining the price level. In the words of the Finance Department Resolution on the Prices Enquiry Committee, "With the year 1905 Indian prices "entered upon a new phase. Prices rose rapidly to unprecedented heights and so far there "is nothing to suggest the probability of a reversion to the levels of former years. The "explanation of this remarkable phenomenon cannot be found in changes of an internal "nature; an examination of the statistics of prices in other countries indicates clearly that "the increase in Indian prices has been broadly synchronous with a general upward movement "in price levels throughout the world, and that its origin must accordingly be sought in "causes more or less common to the whole civilised world." It may be noted that the Committee of the British Association in their Report on "The best methods of ascertaining and measuring variations in the value of the Monetary Standard," the locus classicus on Index Numbers, recommended a decennial basic period. All things considered, a ten-yearly standard was in every way preferable.

3. The main results grouped in quinquennial periods are as follows:—

CLASS I. (*a*).

	1900–1904.	1905–1909.	1910–1914.	1915–1919.
Food grains[1]	89	111	111	136
Oilseeds	90	108	127	146
Oil (coconut)	91	109	143	139
Raw cotton (broach)	96	104	132	195
Indigo	105	95	90	302
Tanned hides (cow)	85	115	134	186
Wool, raw	91	109	111	147
Coffee	103	97	115	113
Manganese ore	83	117	124	148
Cotton yarn (Indian made only)	92	108	128	210
Cotton piece-goods (Indian made only)	101	99	110	121
Rubber, raw	88	112	206	116
GROUP AVERAGE	92	107	124	152

[1] *See* pages 167 to 176.

[2] Wheat, barley, and Rangoon rice.

CLASS. I (*b*).

	1900–1904.	1905–1909.	1910–1914.	1915–1919.
Jute, raw	83	117	143	144
„ manufactured (average of gunny bags and hessian cloth)	89	111	127	207
Raw hides (average of buffalo and cow)	92	108	126	118
Raw skins (goat)	101	99	97	118
Tanned skins (goat and sheep)	91	109	123	227
Tea	90	110	134	146
Mica	84	116	109	190
Shellac	95	105	49	97
GROUP AVERAGE	91	109	117	164

CLASS II.

Grains and pulses[1]	87	113	107	152
Ghi	92	108	128	155
Raw sugar (*gur*)	89	111	107	140
Coal	80	120	122	134
Country tobacco	97	103	131	162
Country salt	102	98	108	294
Turmeric	97	103	111	143
GROUP AVERAGE	90	110	112	161

CLASS III.

Imported cotton piece-goods	91	109	116	206
Grey shirtings	88	112	121	211
„ mulls (dhooties)	94	106	118	206
Bleached shirtings	92	108	109	201
British cotton yarn	90	110	121	229
Java sugar	103	99	102	176
Woollen piece-goods	96	104	105	243
Galvanised iron sheeting	99	101	98	281
Kerosene oil	98	102	110	158
Printing paper	107	93	92	282
Silk piece-goods	100	100	99	164
Liverpool salt	113	87	95	343
Betelnuts	96	104	104	163
GROUP AVERAGE	98	102	106	213

4. Proof copies of the Blue Book on "Index Numbers of Indian Prices, 1861–1918"[2] are also submitted in order that a reference may be made to the prices for years previous to 1900 should such a reference be considered necessary.

I have, &c.,
G. FINDLAY SHIRRAS,
Director of Statistics.

DEPARTMENT OF STATISTICS,
The 16th August, 1919.

[1] Country rice, jawar, bajra, maize, ragi, gram and dal.

[2] Not printed.

TABLES ANNEXED to LETTER from DIRECTOR of STATISTICS to the

Wholesale Prices of certain Articles in India

CLASS

Articles.*	Rate per	Number of Markets Selected.†	1900.	1901.	1902.	1903.	1904.	1905.	1906.	1907.	1908.
			R. A. P.	R. A. P.	R. A. P.	R. A. P.	R. A. P.	R. A. P.	R. A. P.	R. A. P.	R. A. P.
Wheat	Md.	8	3 9 0	3 3 7	2 13 4	2 11 4	2 9 5	2 13 4	3 5 2	3 4 2	4 13 0
Barley	,,	3	2 9 11	1 15 7	1 13 2	1 11 2	1 7 7	1 10 1	2 7 4	2 3 3	3 5 9
Rangoon rice	Cwt.	1	3 12 6	3 5 11	3 4 2	4 2 10	3 7 2	3 12 1	4 5 3	4 13 4	5 2 10
Linseed	Md.	3	5 1 3	5 5 4	5 9 8	4 6 7	3 8 11	3 15 0	4 15 5	4 13 7	5 7 7
Castor seed	Cwt.	2	7 0 11	6 15 1	5 11 7	4 7 2	4 4 2	5 10 11	7 8 2	8 4 4	6 10 11
Til	Md.	4	5 5 6	4 15 8	5 9 8	4 0 7	3 8 0	5 1 6	5 15 3	6 11 1	7 14 2
Mustard and rape seed.	,,	5	4 11 0	4 10 8	4 2 9	3 11 1	3 8 9	3 12 5	5 3 9	5 11 5	6 10 10
Ground nuts	Cwt.	2	5 14 10	7 10 0	6 15 11	6 2 5	5 9 10	6 6 5	7 9 7	8 0 3	8 15 3
Cotton seed	Candy of 7 cwt.	1	—	—	—	15 4 0	15 8 0	15 12 0	19 4 0	19 12 0	24 12 0
Copra (*a*)	Cwt.	—	10 11 7	10 11 10	11 13 8	13 12 7	10 8 4	13 5 8	12 15 1	17 10 0	13 3 10
Coconut oil	Md.	1	13 2 0	13 12 0	16 2 0	12 9 0	13 10 0	15 6 0	15 15 0	21 4 0	14 4 0
Raw cotton (broach).	Candy of 784 lbs.	1	219 0 0	215 0 0	212 0 0	207 4 0	248 0 0	215 8 0	252 0 0	248 12 0	246 8 0
Indigo	Fy. md. of 74·67 lbs.	1	195 0 0	170 0 0	170 0 0	160 0 0	175 0 0	140 0 0	160 0 0	170 0 0	160 0 0
Tanned hides (cow)	lb.	1	0 7 9	0 7 2	0 8 6	0 9 2	0 9 4	0 10 11	0 11 0	0 11 4	0 11 7
Wool	Md.	2	21 0 7	20 3 0½	18 3 5	21 14 6	23 6 8	27 10 9	26 12 3	28 2 8	21 12 6
Coffee (*a*)	Cwt.	—	50 11 5	50 2 9	47 9 2	46 14 3	48 3 7	46 2 3	49 11 8	42 6 2	43 13 10
Manganese ore (*a*)	,,	—	0 7 0	0 7 9	0 8 11	0 10 5	0 9 4	0 10 1	0 11 5	0 11 10	0 14 0
Cotton yarn (Indian made only).	lb.	1	0 5 3	0 5 9	0 5 8	0 5 9	0 6 7	0 6 11	0 7 4	0 6 11	0 6 4
Cotton piece-goods—(Indian made only)‡ :											
Grey (*a*)	Yd.	—	0 1 11	0 2 0	0 2 0	0 1 11	0 2 1	0 2 3	0 2 4	0 2 5	0 2 5
White (*a*)	,,	—	0 6 10	0 5 6	0 9 4	0 11 11	0 7 5	0 7 7	0 6 0	0 5 6	0 10 8
Coloured, printed or dyed (*a*).	,,	—	0 4 7	0 4 7	0 4 3	0 4 9	0 4 7	0 4 4	0 4 8	0 4 5	0 4 9
Rubber, raw	Cwt.	—	167 12 3	170 9 6	119 4 1	168 9 10	206 3 2	233 0 8	224 10 0	209 12 11	196 7 0

* For the grades of each commodity, *see* Appendix.
† For details, *see* Appendix.
‡ For imported piece-goods, *see* Class III.
(*a*) Declared value of exports.

Index

(Average of

Articles.	1900.	1901.	1902.	1903.	1904.	1905.	1906.	1907.	1908.	1909.
Wheat	106	96	84	80	77	84	99	97	143	134
Barley	120	91	83	78	68	75	112	101	153	119
Rangoon rice	94	83	81	103	85	93	107	119	128	107
Linseed	104	109	115	91	73	81	102	100	112	113
Castor seed	112	110	91	71	68	90	119	131	106	102
Til	97	90	101	73	63	92	108	121	143	112
Mustard and rape seed	99	98	88	78	75	80	110	121	141	110
Ground nuts	83	107	99	87	79	90	107	113	126	109
Cotton seed (*b*)	—	—	—	72	73	74	91	93	117	115
Copra	83	83	92	107	81	103	100	136	102	113
Coconut oil	86	90	106	83	90	101	105	140	94	105
Raw cotton (broach)	95	93	92	90	108	93	109	108	107	105
Indigo	118	103	103	97	106	85	97	103	97	91
Tanned hides (cow)	79	73	86	94	95	112	112	116	118	115
Wool	91	87	79	95	101	119	115	122	94	97
Coffee	108	106	101	100	102	99	106	90	93	95
Manganese ore	67	74	86	100	90	97	109	114	134	129
Cotton yarn (Indian made only).	83	91	90	91	104	110	116	110	101	104
Cotton piece-goods—(Indian made only).										
Grey	89	93	93	89	96	104	108	112	112	104
White†	92	74	125	160	100	102	80	74	143	50
Coloured, printed or dyed	100	100	93	104	100	95	103	97	104	104
Average—Cotton piece-goods	*94*	*89*	*104*	*118*	*99*	*100*	*97*	*94*	*119*	*86*
Rubber, raw	88	90	63	89	108	122	118	110	103	109
Average	**95**	**92**	**93**	**92**	**88**	**95**	**106**	**110**	**117**	**106**

(*b*) Base—1903-1912, no quotation available for 1900 to 1902.

GOVERNMENT OF INDIA, FINANCE DEPARTMENT, dated 16th August 1919.

from 1900 *to* 1919 *with Index Numbers.*

I (*a*).

1909.			1910.			1911.			1912.			1913.			1914.			1915.			1916.			1917.			1918.			1919.			Articles.
R.	A.	P.	R.	A.	P.	R.	A.	P.	R.	A.	P.	R.	A.	P.	R.	A.	P.	R.	A.	P.	R.	A.	P.	R.	A.	P.	R.	A.	P.	R.	A.	P.	
4	7	10	3	10	6	3	2	2	3	6	0	3	9	6	3	15	4	4	14	6	4	4	9	4	6	1	5	0	5	7	1	4	Wheat.
2	9	5	1	15	1	1	11	6	2	5	11	2	8	3	2	14	11	2	15	7	2	15	8	2	11	10	2	15	4	4	11	2	Barley.
4	5	3	3	15	1	4	11	0	6	9	2	5	0	7	4	8	10½	4	11	2	4	1	7½	3	12	1	3	8	9	5	5	0	Rangoon rice.
5	8	0	7	0	8	8	3	10	7	11	10	5	3	0	5	8	1	4	9	3	5	3	2	5	10	4	4	12	5	12	5	11	Linseed.
6	6	9	7	7	7	7	8	10	7	5	7	7	6	1	6	15	10	6	3	1	7	1	4	8	2	6	10	15	1	15	10	1	Castor seed.
6	3	4	6	3	3	7	4	7	7	15	0	7	13	7	7	6	2	6	1	1	5	13	2	5	15	1	8	10	2	13	3	2	Til.
5	3	11	4	7	11	4	15	9	6	1	1	5	12	5	6	1	1	5	7	2	4	12	9	4	13	5	5	7	7	11	0	11	Mustard and rape seed.
7	11	11	8	6	1	8	9	0	8	10	3	9	2	8	9	9	5	6	7	6	7	13	10	7	2	6	7	10	8	18	9	6	Ground nuts.
24	6	0	25	2	0	25	12	0	26	12	0	26	4	0	24	14	0	19	7	3	25	4	6½	25	0	0	34	8	0	53	8	0	Cotton seed.
14	9	4	17	2	5	17	3	11	17	0	1	19	2	4	19	1	11	23	3	9	19	15	5	19	6	10	24	2	5	28	6	0	Copra.
16	0	6	21	11	0	21	12	9	20	4	0	23	2	0	21	14	0	19	6	0	21	0	0	21	1	0	17	14	0	26	4	0	Coconut oil.
242	0	0	303	0	0	342	0	0	283	0	0	309	0	0	289	8	0	205	0	0	292	0	0	461	0	0	653	0	0	636	0	0	Raw cotton (broach).
150	0	0	155	0	0	145	0	0	140	0	0	140	0	0	165	0	0	650	0	0	650	0	0	537	8	0	282	8	0	372	8	0	Indigo.
0	11	3	0	11	4	0	12	6	0	12	6	0	13	6	0	15	9	1	1	6	1	0	9	1	2	0	1	5	3	1	1	7	Tanned hides (cow).
22	9	7	24	10	7	25	10	8	25	8	8	26	6	8	26	12	9	27	4	9	35	9	1	33	15	0	35	9	6	38	9	0	Wool.
44	11	10	44	15	0	52	13	3	59	10	10	59	14	9	53	9	11	54	7	3	52	14	0	52	4	4	47	4	5	59	7	2	Coffee.
0	13	6	0	12	3	0	11	6	0	14	4	0	13	2	0	13	4	0	13	2	1	1	6	0	15	5	0	15	9	0	15	3	Manganese ore.
0	6	7	0	7	8	0	8	11	0	8	1	0	8	2¼	0	7	6¾	0	5	10½	0	7	6	0	11	9	1	3	6	1	5	6	Cotton yarn (Indian made only).
																																	Cotton piece-goods (Indian made only).
0	2	3	0	2	4	0	2	5	0	2	10	0	2	8	0	2	8	0	2	4	0	2	2	0	3	0	0	4	8	0	6	0	Grey.
0	3	9	0	8	3	0	4	11	0	5	9	0	7	8	0	7	0	0	4	2	0	4	11	0	4	3	0	5	8	0	6	9	White.
0	4	9	0	6	2	0	5	1	0	5	10	0	5	4	0	4	11	0	5	4	0	4	6	0	4	11	0	6	4	0	7	3	Coloured, printed or dyed.
208	9	4	477	2	4	371	9	6	414	5	8	398	4	2	302	15	5	267	11	2	235	13	9	219	11	0	200	15	2	177	5	10	Rubber, raw.

Numbers.

1900–1909 = 100.)

1910.	1911.	1912.	1913.	1914.	1915.	1916.	1917.	1918.	1919.	Articles.
109	93	100	107	118	146	128	130	149	211	Wheat.
89	79	109	115	134	136	137	126	136	215	Barley.
97	116	162	124	113	116	101	93	88	131	Rangoon rice.
145	169	159	106	113	94	107	116	98	254	Linseed.
119	120	117	117	111	98	112	130	174	248	Castor seed.
112	132	144	142	134	110	105	107	156	239	Til.
95	105	128	126	128	115	101	102	115	233	Mustard and rape seed.
118	121	122	129	135	91	111	101	108	262	Ground nuts.
148	121	126	124	117	92	119	118	163	252	Cotton seed.
133	133	131	148	148	180	154	150	187	219	Copra.
143	143	133	152	144	127	138	139	118	173	Coconut oil.
131	148	123	134	126	89	127	200	283	276	Raw cotton (broach).
94	88	85	85	100	394	394	326	171	226	Indigo.
116	128	128	138	161	179	171	184	217	180	Tanned hides (cow).
106	111	110	114	116	118	153	146	154	166	Wool.
95	112	127	127	114	116	112	111	100	126	Coffee.
118	110	138	146	128	126	168	148	151	146	Manganese ore.
122	141	128	130	120	93	119	186	309	341	Cotton yarn (Indian made only).
										Cotton piece-goods— (Indian made only).
108	112	131	124	124	108	100	139	216	278	Grey.
111	66	77	103	94	56	66	57	76	91	White.†
135	111	128	117	108	117	99	108	139	159	Coloured, printed or dyed.
118	*96*	*112*	*115*	*109*	*94*	*88*	*101*	*144*	*176*	*Average—Cotton piece-goods.*
250	195	218	209	159	141	124	115	105	93	Rubber, raw.
121	**121**	**128**	**127**	**125**	**129**	**134**	**138**	**155**	**205**	**Average.**

† On the average of the five pre-war years white Indian made piece-goods exported were less than 1 per cent. of the total Indian made piece-goods exported.

Wholesale Prices of certain Articles

CLASS

Articles.*	Rate per	Number of Markets Selected.†	1900.	1901.	1902.	1903.	1904.	1905.	1906.	1907.	1908.
			R. A. P.	R. A. P.	R. A. P.	R. A. P.	R. A. P.	R A. P.	R. A. P.	R. A. P.	R. A. P.
Raw jute - -	Bale of 400 lbs.	1	34 14 0	33 12 0	32 8 0	34 14 0	33 14 0	41 12 0	59 14 0	61 6 0	42 8 0
Manufactured jute—											
Gunny bags -	100 bags.	1	23 12 0	22 14 0	20 12 0	21 4 0	23 14 0	25 12 0	31 11 0	35 6 0	30 12 0
Hessian cloth -	100 yds.	1	10 9 0	11 6 0	9 12 0	9 12 0	9 14 0	10 8 0	12 14 0	14 15 0	11 2 6
Raw hides—											
Buffalo - -	20 lbs.	1	7 12 0	7 8 0	8 14 0	8 2 0	7 14 0	8 8 0	8 8 0	9 4 0	7 12 0
Cow - - -	,,	1	12 8 0	13 4 0	14 8 0	15 14 0	15 12 0	18 4 0	19 8 0	23 0 0	18 0 0
Raw skins—											
Goat - - -	100 pieces	1	137 8 0	145 4 0	137 8 0	120 0 0	121 4 0	131 4 0	143 12 0	130 0 0	97 8 0
Tanned skins—											
Goat - - -	lb.	1	1 4 3	1 3 11	1 7 1	1 5 0	1 2 6	1 2 0	1 8 6	1 6 10	1 2 7
Sheep - -	,,	1	0 14 1	0 13 10	0 15 4	1 0 7	1 1 6	1 4 0	1 10 0	1 9 10	1 1 6
Tea - - -	,,	1	0 5 1	0 3 5	0 4 4	0 5 6	0 5 9	0 4 11	0 4 11	0 6 7	0 7 3
Mica (*a*) - -	cwt.	—	46 5 4	59 5 11	59 7 5	58 15 3	62 5 0	91 5 1	77 13 10	80 5 9	67 15 10
Shellac (*b*) - -	Md.	1	42 8 0	45 0 0	70 12 0	78 12 0	102 0 0	74 12 0	96 12 0	100 12 0	65 0 0
Wolfram ore (*a*) -	Ton	—	—	—	—	—	—	—	—	—	—

* For the grade of each commodity, *see* Appendix. † For details, *see* Appendix.
(*a*) Declared value of exports. Figures for wolfram ore for years previous to 1914 are not available.
(*b*) Average of same grades as in Blue Book "Index Numbers of Indian Prices, 1861–1918."

Index

(Average of

Articles.	1900.	1901.	1902.	1903.	1904.	1 05.	1906.	1907.	1908.	1909.
Raw jute - - - -	85	83	80	85	83	102	146	150	104	**82**
Manufactured jute—										
Gunny bags - - - -	90	87	79	81	91	97	120	134	116	105
Hessian cloth - - -	96	103	88	88	90	95	117	135	101	87
Average - - -	*93*	*95*	*84*	*85*	*90*	*96*	*118*	*134*	*109*	*96*
Raw hides—										
Buffalo - - - - -	95	92	109	99	96	104	104	113	95	**93**
Cow - - - - -	74	79	86	94	94	109	116	137	107	104
Average - - -	*85*	*86*	*98*	*96*	*95*	*106*	*110*	*125*	*101*	*98*
Raw skins—										
Goat - - - - -	105	111	105	92	93	100	110	99	74	111
Tanned skins—										
Goat - - - - -	98	96	112	102	90	87	119	111	90	95
Sheep - - - - -	76	74	82	89	94	107	139	138	94	107
Average - - -	*87*	*85*	*97*	*96*	*92*	*97*	*129*	*124*	*92*	*101*
Tea - - - - -	94	64	81	102	107	91	91	122	135	113
Mica - - - - -	68	87	88	87	92	135	115	118	100	110
Shellac - - - - -	60	63	99	109	143	105	136	141	91	53
Average‡ - -	**86**	**85**	**92**	**93**	**98**	**103**	**119**	**127**	**101**	**96**

‡ Exclusive of wolfram ore.

from 1900 *to* 1919 *with Index Numbers*—continued.

I (*b*).

1909.	1910.	1911.	1912.	1913.	1914.	1915.	1916.	1917.	1918.	1919.	Articles.
R. A. P.	R. A. P.	R. A. P.	R. A. P.	R. A. P.	R. A. P.	R. A. P.	R. A. P.	R. A. P.	R. A. P.	R. A. P.	
33 6 0	34 2 0	54 3 6	52 14 0	71 4 0	80 10 0	49 8 0	54 0 0	54 0 0	47 12 0	89 8 0	Raw jute.
											Manufactured jute.
27 12 0	27 14 0	31 6 0	36 4 0	39 2 0	42 8 0	38 12 0	41 12 0	43 12 0	67 8 0	59 8 0	Gunny bags.
9 10 0	8 15 0	10 14 0	13 10 0	17 4 0	15 4 0	16 8 0	18 4 0	17 12 0	47 0 0	24 8 0	Hessian cloth.
											Raw hides—
7 10 0	8 14 0	8 2 0	8 8 0	14 0 0	14 0 0	11 4 0	10 10 0	12 12 0	9 12 0	10 8 0	Buffalo.
17 8 0	22 0 0	19 8 0	21 8 0	18 12 0	21 4 0	16 3 0	16 4 0	18 0 0	16 12 0	19 4 0	Cow.
											Raw skins—
145 0 0	140 0 0	105 0 0	130 0 0	132 8 0	130 0 0	92 8 0	130 0 0	163 12 0	122 8 0	262 8 0	Goat.
											Tanned skins—
1 3 7	1 5 0	1 6 2	1 6 11	1 12 2	1 10 0½	1 7 2	2 3 4	2 5 6	3 1 0	5 10 6	Goat.
1 4 0	1 3 9	1 6 2	1 9 6	1 11 8½	1 10 8½	1 8 4½	2 4 2½	2 7 0½	2 13 0	4 2 0	Sheep
0 6 1	0 6 10	0 7 6	0 7 5	0 6 11	0 7 5	0 9 7	0 8 6	0 7 7	0 7 0½	0 6 8	Tea.
74 14 8	61 12 2	57 11 2	76 2 1	82 0 3	91 2 0	87 3 1	102 3 8	107 14 4	170 0 5	177 1 0	Mica.
37 12 0	33 6 0	34 2 0	29 6 0	40 0 0	36 6 0	27 0 0	36 4 0	77 8 0	92 8 0	113 0 0	Shellac.
—	—	—	—	—	1,481 13 1	1,525 7 0	2,326 6 5	2,233 10 10	2,275 3 6	1,947 11 0	Wolfram ore.

Numbers.

1900–1909 = 100.)

1910.	1911.	1912.	1913.	1914.	1915.	1916.	1917.	1918.	1919.	Articles.
83	133	129	174	197	121	132	132	117	219	Raw jute.
										Manufactured jute—
106	119	137	148	161	147	158	166	256	226	Gunny bags.
81	99	123	156	138	149	165	161	426	222	Hessian cloth.
93	*109*	*130*	*152*	*1 9*	*148*	*161*	*163*	*341*	*224*	*Average.*
										Raw hides—
109	99	104	171	171	138	130	156	119	128	Buffalo.
131	116	128	112	126	96	97	107	100	114	Cow
120	*107*	*116*	*141*	*148*	*117*	*113*	*131*	*109*	*121*	*Average.*
										Raw skins—
107	80	99	101	99	71	99	125	94	201	Goat.
										Tanned skins—
102	107	111	137	126	112	171	182	238	439	Goat.
106	119	137	148	143	131	194	209	241	354	Sheep.
104	*113*	*124*	*142*	*134*	*121*	*182*	*195*	*239*	*396*	*Average.*
127	139	138	128	138	178	158	141	131	124	Tea.
91	85	112	121	134	128	151	159	250	261	Mica.
47	48	41	56	51	38	51	109	130	158	Shellac.
99	**104**	**114**	**132**	**135**	**119**	**137**	**150**	**191**	**222**	**Average.**

Wholesale Prices of certain Articles

CLASS

Articles.*	Rate per	Number of Markets Selected.†	1900.	1901.	1902.	1903.	1904.	1905.	1906.	1907.	1908.
			R. A. P.	R. A. P.	R. A. P.	R. A. P.	R. A. P.	R. A. P.	R. A. P.	R. A. P.	R. A. P.
Country rice	Md.	5	3 7 9	3 14 9	3 11 1	3 8 6	3 4 2	3 9 7	4 7 10	5 5 0	5 12 2
Jawar	,,	4	3 12 1	2 9 6	2 6 0	1 11 11	1 10 10	1 12 9	2 12 10	2 7 2	3 9 2
Bajra	,,	4	3 8 2	2 6 9	2 1 11	1 14 1	1 11 1	2 1 4	3 2 3	2 4 11	3 10 6
Maize	,,	3	3 3 0	2 0 4	1 12 8	1 10 4	1 6 5	1 10 11	2 13 9	2 10 6	4 2 0
Ragi	,,	1	2 9 6	2 11 2	1 14 5	1 8 8	1 6 7	2 4 2	2 10 1	2 8 4	2 12 0
Gram	,,	3	3 1 4	2 9 9	2 0 1	1 14 8	1 12 3	2 0 5	2 12 10	2 9 7	4 0 0
Dal (arhar)	,,	4	3 13 4	3 15 10	3 4 7	3 6 1	3 8 3	3 8 11	4 12 4	5 5 0	5 10 8
Ghi	,,	5	32 5 3	37 12 8	33 0 10	31 6 10	32 14 0	35 0 11	38 14 3	44 4 1	41 0 1
Raw sugar (*gur*)	,,	5	4 9 7	4 6 1	3 15 4	3 13 10	4 7 7	5 0 2	5 10 9	4 10 6	5 5 10
Coal (*a*)	Ton	1	3 4 6	3 11 0	3 2 9	2 14 3	2 13 6	2 15 0	3 15 6	5 6 0	6 8 0
Country tobacco	Md.	5	10 12 5	9 12 7	9 3 11	8 15 11	7 15 3	7 15 3	8 11 11	10 8 10	11 2 5
Country salt	100 Mds.	1	44 0 0	50 8 0	43 12 0	46 4 0	49 12 0	44 8 0	42 8 0	47 4 0	48 12 0
Leather, unwrought (*b*)	Cwt.	—	—	—	—	—	—	—	—	—	—
Turmeric	Md.	4	13 15 6	13 3 7	8 0 5	5 7 3	5 3 5	7 3 4	11 4 0	11 9 7	10 8 1

* For the grade of each commodity *see* Appendix. † For details *see* Appendix.
(*a*) These prices represent the cost per ton delivered into wagons at the mines.
(*b*) Declared value of exports. Figures for leather for years previous to 1910 are not available.

Index

(Average of

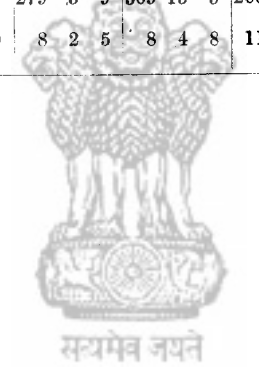
Articles.	1900.	1901.	1902.	1903.	1904.	1905.	1906.	1907.	1908.	1909.
Country rice	83	93	88	84	78	86	107	126	137	118
Jawar	147	101	93	68	65	70	109	96	139	112
Bajra	136	94	82	73	65	80	121	89	141	119
Maize	131	83	74	68	58	69	118	109	170	120
Ragi	109	114	80	65	60	96	111	107	116	142
Gram	117	98	76	73	67	77	106	99	152	135
Dal (arhar)	91	95	78	80	83	84	113	126	134	116
Ghi	88	103	91	86	90	96	106	121	112	107
Raw sugar (*gur*)	97	92	83	81	94	106	120	98	113	116
Coal	83	93	80	73	72	74	100	136	165	124
Country tobacco	112	102	96	93	82	82	91	109	116	117
Country salt	95	110	95	100	108	96	92	102	106	96
Turmeric	147	140	85	58	55	76	119	123	111	86
Average‡	**110**	**101**	**85**	**77**	**75**	**84**	**109**	**111**	**132**	**116**

‡ Exclusive of leather, unwrought.

from 1900 *to* 1919 *with Index Numbers*—continued.

II.

1909.	1910.	1911.	1912.	1913.	1914.	1915.	1916.	1917.	1918.	1919.	Articles.
R. A. P.	R. A. P.	R. A. P.	R. A. P.	R. A. P.	R. A. P.	R. A. P.	R. A. P.	R. A. P.	R. A. P.	R. A. P.	
4 15 5	4 2 9	4 2 1	4 5 6	4 14 5	5 4 8	5 5 11	5 5 6	4 9 7	4 3 9	7 7 7	Country rice.
2 13 10	2 9 3	2 1 1	2 11 10	3 0 3	3 2 4	2 13 5	2 7 3	2 9 8	4 6 2	7 10 10	Jawar.
3 1 4	2 9 6	2 6 6	3 5 8	3 3 2	3 5 10	3 3 6	3 7 2	2 14 11	4 9 4	8 5 1	Bajra.
2 14 7	2 3 6	1 14 6	2 7 10	2 8 4	3 5 5	3 7 5	2 15 2	2 11 6	3 5 11	5 8 3	Maize.
3 5 9	2 10 1	2 7 2	3 3 6	3 3 6	3 3 6	3 3 6	2 12 4	3 0 6	3 4 0	7 5 0	Ragi.
3 9 0	2 4 7	1 15 0	2 6 2	2 9 7	3 8 7	4 1 5	3 5 11	3 0 9	3 4 8	5 15 3	Gram.
4 13 11	3 8 2	3 0 9	3 8 6	3 13 9	5 4 0	5 15 6	5 12 10	4 11 10	4 14 4	9 2 5	Dal (arhar).
39 0 8	45 3 9	42 8 4	46 5 3	51 14 6	48 5 4	45 6 8	49 1 6	54 13 0	59 4 0	74 7 4	Ghi.
5 8 0	5 12 6	5 1 10	4 15 3	4 10 10	4 12 8	6 3 6	6 10 6	6 4 4	6 1 7	7 15 0	Raw sugar (*gur*).
4 14 0	3 14 0	3 11 6	5 1 0	5 12 0	5 13 0	4 8 0	4 0 0	5 8 0	6 10 0	5 14 0	Coal.
11 4 11	12 3 10	12 3 6	11 2 10	13 11 9	13 14 6	15 11 4	13 12 9	14 10 8	15 3 11	18 8 4	Country tobacco.
44 4 0	49 12 0	48 0 0	51 0 0	50 0 0	51 0 0	72 8 0	86 12 0	137 8 0	228 12 0	152 8 0	Country salt.
—	207 3 6	253 14 3	186 11 5	204 11 1	279 3 9	309 15 3	208 10 7	118 14 1	170 8 4	236 1 2	Leather, unwrought.
8 1 11	9 13 5	12 2 11	11 13 8	10 10 10	8 2 5	8 4 8	11 8 1	15 8 5	16 13 11	15 9 0	Turmeric.



Numbers.

1900–1909 = 100.)

1910.	1911.	1912.	1913.	1914.	1915.	1916.	1917.	1918.	1919.	Articles.
99	98	103	117	126	128	127	110	101	178	Country rice.
101	81	107	118	123	111	96	102	171	300	Jawar.
100	93	130	123	130	124	133	113	177	321	Bajra.
91	79	103	104	138	143	121	112	139	227	Maize.
111	103	136	136	136	136	117	128	137	309	Ragi.
87	73	90	99	134	155	128	116	125	226	Gram.
83	72	84	91	125	141	138	112	116	217	Dal (arhar).
124	116	127	142	132	124	134	150	162	204	Ghi.
122	108	104	99	101	131	140	132	128	167	Raw sugar (*gur*).
98	94	128	145	147	114	101	139	168	149	Coal.
127	127	116	142	144	163	143	152	458	192	Country tobacco.
108	104	111	108	111	157	188	298	496	330	Country salt.
104	129	125	113	86	88	122	164	178	165	Turmeric.
104	**98**	**113**	**118**	**126**	**132**	**130**	**141**	**174**	**230**	**Average.**

Wholesale Prices of certain Articles

CLASS

Articles.*	Rate per	Number of markets selected.†	1900.	1901.	1902.	1903.	1904.	1905.	1906.	1907.	1908.
			R. A. P.	R. A. P.	R. A. P.	R. A. P.	R. A. P.	R. A. P.	R. A. P.	R. A. P.	R. A. P.
Imported cotton piece-goods—											
Grey shirtings -	Pi ce	3	4 9 0	4 15 3	4 9 3	4 10 4	4 12 4	5 11 11	6 6 1	6 7 4	5 14 2
„ mulls (dhooties).	„	1	1 8 6	1 7 6	1 4 8	1 6 4	1 5 3	1 4 3	1 9 0	1 14 5	1 12 1
Bleached shirtings	„	3	7 10 7	8 2 8	8 3 0	8 6 5	8 12 8	8 10 9	9 14 2	9 11 9	10 6 6
British cotton yarn	lb.	4	0 8 4	0 9 1½	0 8 4½	0 9 0	0 10 7½	0 10 5½	0 10 8	0 11 6	0 12 1
Java sugar - -	Cwt.	3	—	—	9 14 6	10 9 1	9 15 8	11 11 4	9 0 8	8 15 11	9 5 7
Woollen piece-goods (*a*)	Yd.	—	0 14 10	0 13 6	0 13 8	0 14 1	0 13 4	0 13 8	0 15 1	0 15 7	1 0 7
Silk piece-goods (*a*)	„	—	0 13 8	0 10 5	0 10 10	0 10 11	0 10 7	0 10 9	0 11 1	0 11 10	0 11 2
Galvanised corrugated sheets.	Cwt.	2	10 15 6	9 5 9	9 2 9	8 14 9	8 1 0	8 4 3	9 0 0	9 7 6	10 6 0
Kerosene oil—											
American (Chester).	Case	4	4 4 9	4 12 1	3 8 11	3 13 10	4 10 7	4 2 4	4 7 0	4 7 6	4 10 11
Burma (Victoria)	2 tins.	4	3 13 9	3 4 3	2 12 0	3 4 6	3 3 11	2 11 4	3 0 1	3 7 7	3 7 10
Printing paper (*a*)‡	Cwt.	—	16 9 2	15 6 0	14 11 4	12 11 8	13 11 3	14 1 11	12 14 7	11 10 1	12 14 0
Betel nuts - -	Fy. Md.	1	5 8 0	5 14 0	5 4 0	5 8 0	5 2 0	5 2 0	7 0 0	7 2 0	5 7 0
Liverpool salt (ex-duty.	100 Mds.	1	64 4 0	81 0 0	61 12 0	52 12 0	53 4 0	49 0 0	51 0 0	51 4 0	49 12 0

* For the grade of each commodity *see* Appendix.
‡ Figures for writing paper are not available

† For details *see* Appendix.
(*a*) Declared value of imports.

Index

(Average of

Articles.	1900.	1901.	1902.	1993.	1904.	1905.	1906.	1907.	1908.	1909.
Imported cotton piece-goods—										
Grey shirtings - - -	85	93	86	87	89	107	119	120	110	104
„ mulls (dhooties) - -	102	98	86	93	89	85	104	127	117	99
Bleached shirtings - -	86	91	91	94	98	97	110	109	116	108
Average - - -	*91*	*94*	*88*	*91*	*92*	*96*	*111*	*119*	*114*	*104*
British cotton yarn - - -	83	91	83	90	105	104	106	114	120	104
Java sugar (*b*) - - - -	—	—	100	107	101	118	91	91	95	100
Woollen piece-goods - -	102	93	94	97	92	94	104	107	114	103
Silk piece-goods - - -	122	93	96	97	94	95	98	105	99	101
Galvanised corrugated sheets -	117	100	98	95	86	88	96	101	111	108
Kerosene oil—										
American (Chester) - -	100	96	83	90	109	97	103	104	109	109
Burma (Victoria) - - -	119	101	85	101	100	83	92	107	108	104
Average - - -	*109*	*98*	*84*	*96*	*105*	*90*	*98*	*105*	*108*	*107*
Printing paper - - -	121	112	108	93	100	103	94	85	94	90
Betel nuts - - - -	97	103	93	97	91	91	124	126	96	82
Liverpool salt (ex-duty) - -	115	146	111	95	96	88	92	92	90	75
Average - -	**104**	**101**	**93**	**95**	**96**	**96**	**103**	**107**	**106**	**99**

(*b*) Base = 1902–1911 ; no quotation available for 1900 and 1901.

from 1900 to 1919 with Index Numbers—concluded.

III.

1909.	1910.	1911.	1912.	1913.	1914.	1915.	1916.	1917.	1918.	1919.	Articles.
R. A. P.	R. A. P.	R. A. P.	R. A. P.	R. A. P.	R. A. P.	R. A. P.	R. A. P.	R. A. P.	R. A. P.	R. A. P.	
											Imported cotton piece-goods—
5 9 3	6 1 8	6 11 9	6 5 10	6 9 1	6 7 7	6 2 10	7 0 8	9 6 6	16 1 4	17 14 0	Grey shirtings.
1 7 9	1 11 0	1 13 1	1 10 9	1 14 9	1 12 0	1 8 6	1 13 9	2 11 6	4 9 6	4 11 9	„ mulls (dhooties).
9 10 1	10 6 4	10 10 1	9 9 5	9 8 0	8 12 8	8 5 8	10 13 4	17 7 6	24 15 4	28 6 8	Bleached shirtings.
0 10 6¼	0 11 11½	0 13 1½	0 11 4½	0 12 0	0 12 4	0 10 8	0 14 3	1 4 1½	2 2 7½	2 4 1	British cotton yarn.
9 14 11	10 9 7	8 14 8	12 6 3	10 0 6	8 9 1	14 8 2	17 5 7	16 8 9	15 10 4	22 15 5	Java sugar.
0 15 0	0 14 5	0 15 7	0 15 3	0 15 1	1 0 2	1 4 10	1 10 1	1 9 6	2 10 10	3 13 6	Woollen piece-goods.
0 11 3	0 11 3	0 11 2	0 10 9	0 11 0	0 11 4	0 11 6	0 15 2	0 15 9	1 6 6	1 11 2	Silk piece-goods.
10 1 0	8 14 0	9 0 10	9 7 2	9 9 6	8 14 6	11 6 6	17 12 0	30 9 0	39 8 0	32 8 0	Galvanised corrugated sheets.
											Kerosene oil—
4 11 2	4 13 9	4 12 8	4 12 0	4 14 6	5 1 0	5 1 3	5 13 2	6 13 7	8 15 4	11 0 9	American (Chester).
3 6 1	3 5 6	3 4 0	3 8 5	3 9 11	3 10 3	3 10 3	3 10 3	3 15 6	5 7 7	5 15 7	Burma (Victoria).
12 5 2	12 3 2	12 8 3	12 15 8	12 14 3	12 3 1	13 9 6	19 11 2	32 14 11	49 12 11	42 12 4	Printing paper.
4 10 0	5 8 0	6 2 0	5 12 0	5 6 0	6 11 0	8 4 0	7 8 0	10 0 0	10 0 0	10 5 0	Betel nuts.
41 8 0	41 4 0	58 4 0	55 8 0	56 0 0	53 8 0	131 8 0	145 8 0	202 8 0	284 0 0	188 0 0	Liverpool salt (ex-duty).

Numbers.

1900—1909 = 100.)

1910.	1911.	1912.	1913.	1914.	1915.	1916.	1917.	1918.	1919.	Articles.
										Imported cotton piece-goods—
114	126	119	123	121	115	132	176	300	334	Grey shirtings.
112	121	111	128	117	102	124	181	306	316	„ mulls (dhooties).
116	119	107	106	98	93	121	195	279	317	Bleached shirtings.
114	*122*	*112*	*119*	*112*	*103*	*126*	*184*	*295*	*322*	*Average.*
119	130	113	119	122	106	141	199	343	358	British cotton yarn.
107	90	125	101	87	147	175	167	158	232	Java sugar.
99	107	105	104	111	143	180	175	295	423	Woollen piece-goods.
101	100	96	98	101	102	136	141	201	242	Silk piece-goods.
95	97	101	102	95	122	190	326	422	347	Galvanised corrugated sheets.
										Kerosene oil—
118	112	111	114	118	118	136	160	209	257	American (Chester).
103	100	109	112	112	112	112	122	169	184	Burma (Victoria).
108	*106*	*110*	*118*	*115*	*115*	*124*	*141*	*189*	*220*	*Average.*
89	91	95	94	89	99	144	240	364	312	Printing paper.
97	108	102	95	118	146	133	177	177	182	Betel nuts.
74	105	100	101	96	237	262	365	511	338	Liverpool salt (ex-duty).
103	**108**	**107**	**107**	**107**	**126**	**153**	**202**	**287**	**296**	**Average.**

APPENDIX.

List of the Articles and Markets selected and the sources of the Price Quotations.

Article.	Markets Selected.	Source.
CLASS I.(*a*)—		
Wheat	Karachi, Amritsar, Delhi, Cawnpore, Jubbulpore, Patna, Bombay, and Calcutta.	Half-monthly statement of wholesale prices of food-grains, salt, &c., and Bombay Chamber of Commerce Price Current.
Barley	Cawnpore, Patna, and Lahore	Half-monthly statement of wholesale prices of food-grains, salt, &c.
Rangoon rice, Ngatsain	Rangoon	Monthly statement of the Chief Collector of Customs, Burma.
Linseed	Cawnpore, Patna, and Jubbulpore	Half-monthly statement of wholesale prices of food-grains, salt, &c.
Castor seed	Madras and Bombay	Madras and Bombay Chambers of Commerce Prices Current.
Til (sesamum)	Cawnpore, Jubbulpore, Surat, and Madras.	Half-monthly statement of wholesale prices of food-grains, salt, &c.
Mustard and rapeseed	Calcutta, Gauhati, Patna, Cawnpore, and Lahore.	Ditto.
Cotton seed	Bombay	Bombay Market Report.
Ground nuts	Madras and Bombay	Madras and Bombay Chambers of Commerce Prices Current.
Copra	Declared value of exports	Sea-borne Trade Accounts.
Coconut oil	Calcutta	"Capital."
Raw cotton, broach	Bombay	Bombay Chamber of Commerce Price Current.
Indigo, good middling to good	Calcutta	Calcutta Price Current.
Tanned hides, cow	Madras	Weekly Statement of the Collector of Customs, Madras.
Wool, raw—		
Kandahar	Karachi	Karachi Chamber of Commerce Price Current.
Tibetan	Kalimpong	"Capital" and prices furnished by the Sub-divisional Officer, Kalimpong.
Coffee	Declared value of exports	Sea-borne Trade Accounts.
Manganese ore	Ditto	Ditto.
Cotton yarn 20s (Indian made only).	Bombay	Bombay Millowners' Association "Current quotations."
Cotton piece-goods (Indian made only).	Declared value of exports	Sea-borne Trade Accounts.
Rubber, raw	Ditto	Ditto.
CLASS I.(*b*)—		
Raw jute (average of C.D.M. & Co. (red) group and M group).	Calcutta	Calcutta Price Current.
Manufactured jute—		
Gunny bags, No. 2 Twill, 44″ × 26″ up to July 1909 and 2½ lb. 44″ × 26″ from 1910.	Ditto	Ditto.
Hessian cloth, 10½ oz. 40″	Ditto	Ditto.
Raw hides—		
Buffalo, arsenic slaughtered	Ditto	Ditto.
Cow, Agras 8 lb.	Ditto	Ditto.
Raw skins, goat	Ditto	Ditto.
Tanned skins, goat and sheep	Madras	Madras Price Current.
Tea (average of "Fair (Assam) Pekoe," "Fair (Assam) Pekoe Souchong," and "Fair (Cachar and Sylhet) Pekoe Souchong").	Calcutta	Calcutta Price Current.
Mica	Declared value of exports	Sea-borne Trade Accounts.
Shellac (average of "T.N." and A.C. garnet).	Calcutta	Calcutta Price Current.
Wolfram ore	Declared value of exports	Sea-borne Trade Accounts.

APPENDIX—*continued.*

List of the Articles and Markets selected and the sources of the Price Quotations—continued.

Article.	Markets Selected.	Source.
CLASS II.—		
Country rice	Calcutta, Sylhet, Patna, Fyzabad, and Madras.	Half-monthly statement of wholesale prices of food-grains, salt, &c.
Jawar	Cawnpore, Ahmednagar, Nagpur, and Bellary.	Ditto.
Bajra	Cawnpore, Rawalpindi, Ahmednagar, and Coimbatore.	Ditto.
Maiz	Muzaffarpur, Benares, and Lahore	Ditto.
Ragi	Salem	Ditto.
Gram	Muzaffarpur, Cawnpore, and Lahore.	Ditto.
Dal (arhar)	Calcutta, Muzaffarpur, Benares, and Lahore.	Ditto.
Ghi	Calcutta, Cawnpore, Delhi, Jubbulpore, and Madras.	Ditto.
Raw sugar (*gur*)	Calcutta, Patna, Benares, Lahore, and Madras.	Ditto.
Coal—		
Desharghur, 1st class	Calcutta	Calcutta Price Current.
Jherria, 1st class	Calcutta	Calcutta Price Current.
Country tobacco	Muzaffarpur, Agra, Lahore, Jubbulpore, and Madras.	Half-monthly statement of wholesale prices of food-grains, salt, &c.
Country salt—Bombay	Calcutta	"Capital."
Leather, unwrought	Declared value of exports	Sea-borne Trade Accounts.
Turmeric	Agra, Lahore, Jubbulpore, and Madras.	Half-monthly statement of wholesale prices of food-grains, salt, &c.
CLASS III.—		
Imported cotton piece-goods—		
Grey shirtings—		
Calcutta, 34", 37½–38 yds., 18 × 15.	Calcutta	Calcutta Price Current.
Bombay, "Fari," 2,000 (39" × 37½–38 yds.).	Bombay	Bombay Market Report.
Cawnpore, No. 2, 39" × 38½ yds.	Cawnpore	Weekly statement furnished by the Collector of Cawnpore.
Bleached shirtings—		
Calcutta, 35 × 40	Calcutta	Calcutta Price Current.
Bombay, Liepman's	Bombay	Bombay Market Report.
Karachi	Karachi	Karachi Chamber of Commerce Price Current.
Grey mulls (dhooties), 44 × 10	Calcutta	Calcutta Price Current.
British cotton yarn—		
Grey yarn, 40s	Ditto	Ditto.
„ 40s Water twist	Bombay	Bombay Chamber of Commerce Price Current.
Grey 40s Plough	Karachi	Karachi Chamber of Commerce Price Current.
Grey 40s Mule	Madras	Weekly statement furnished by the Collector of Customs, Madras.
Java sugar—		
D.S. 16—18–19	Calcutta	Calcutta Price Current.
Brown Java	Bombay	Bombay Market Report.
White Java	Karachi	Karachi Chamber of Commerce Price Current.
Woollen piece-goods	Declared value of imports	Sea-borne Trade Accounts.
Galvanised iron sheeting—		
Corrugated sheets—ordinary	Calcutta	Calcutta Price Current.
Iron, galvanised, corrugated	Bombay	Bombay Market Report.
Kerosene—		
American (Chester)	Calcutta, Bombay, Karachi and Madras	Prices Current of the local Chambers of Commerce and Weekly statement furnished by the Collector of Customs, Madras.
Burma (Victoria)	Calcutta, Bombay, Karachi and Madras	Prices Current of the local Chambers of Commerce and Weekly statement furnished by the Collector of Customs, Madras.
Printing paper*	Declared value of imports	Sea-borne Trade Accounts.
Silk piece-goods	Ditto	Ditto.
Salt, Liverpool (ex-duty)	Calcutta	Calcutta Price Current.
Betel nuts—Singapore	Ditto	Ditto.

* Data for writing paper not available.

APPENDIX XXIX.

(a) Telegraphic Correspondence between the Secretary of State and the Government of India on the Subject of Currency Policy.

From Secretary of State to Government of India, dated 1st October 1919.

Currency Committee anticipate conclusion of hearing of oral evidence within next fortnight or three weeks. During recent months, position has changed in various ways, notably in respect of rise in exchange and policy as regards acquisition of gold. Copies of evidence taken before recess and papers received by Committee were sent out to your Financial Secretary on 10th September. Committee will be glad to receive by telegram as soon as possible any observations as regards future policy that you may desire to make in light of present conditions and developments since submission of your case.

From Government of India to the Secretary of State, dated 10th October 1919.

Your telegram of the 1st October. Currency Committee. Paragraph 1. Since statement of case presented on our behalf to Committee by Gubbay was prepared there has been marked development of position in various ways.

(1) Fundamental new aspect of problem has emerged owing to discount on pound sterling as measured in gold having become apparent, this raising large question whether basis of policy should be linking of rupee on to pound sterling or direct to gold.

(2) Subject to above, problem as to rate at which rupee should be fixed has been greatly simplified and narrowed by following facts:—

(*a*) Experience has been gained as to result of relaxation of control over gold and silver by United States.

(*b*) Prospects of India obtaining gold in substantial quantities now seem assured, *vide* Kent's evidence.

(*c*) We have been permitted to fix effective gold acquisition rate with greater reference to realities of position, and it has also been possible to abolish monopoly of sale of Council bills and to remove restrictions on exchange banks' operations, all of which measures appear already to be having most beneficial results.

(*d*) Exchange has, without apparent material ill-effects to anybody, now been pushed up to equivalent of 2*s.* as measured in sterling, which would if pound sterling were at par with gold represent figure of reasonable safety as regards silver purchases.

(*e*) Vital importance of arresting rise in prices in India has become daily more apparent, *vide* explanatory memorandum accompanying statistics regarding Indian price movements sent with Financial Secretary's letter of 4th September.

2. As regards (1) above we entirely agree with the substance of views expressed by Keynes in his evidence before Committee. We are specially impressed by following considerations:—

(*a*) In absence of fixation of definite gold parity for rupee it would be impossible to fix by legislation permanent rate at which gold should be held in our Paper Currency Reserve or at which sovereigns or gold coins issued by us should be legal tender in India.

(*b*) Unless basis is gold instead of pound sterling, free, namely uncontrolled, gold imports into India would, so long as the pound is at discount, never be profitable method of importing funds into India as compared with rate at which you sell your Councils. At present moment private import of gold is only made a practical proposition by artificial arrangement under which all gold imports are commandeered by Government at rate varying with reference to premium on gold measured in pound sterling.

(*c*) If rupee is linked on to pound sterling then, should latter further depreciate, (? internal) Indian prices would inevitably rise along with English prices.

On this point we entirely agree with remarks by Lucas in para. 3 of his supplement to Memorandum C. and with evidence given by Keynes on this aspect of problem. See in this connection para. 5 to 8 of our memorandum regarding prices mentioned above. With regard to para. 8 thereof, we may add that we have just concluded an informal conference with Provincial representatives regarding the initial contributions to be taken from the Provinces under the Reforms Scheme with reference to their standards of revenue and expenditure as based on current year's budget. We have not yet completely worked out results, but it is abundantly clear that

wholesale revisions of pay of all establishments from top to bottom necessitated by rise in prices will constitute a very heavy burden on the resources of the Provinces. We now estimate that gross normal surpluses of Provinces based on current year's figures, and making no allowances for new schemes of expenditure not yet sanctioned will amount, at most, to little more than 11 crores as compared with contributions of 12 crores which we had expected to be able to obtain from them at initial settlements. It is evident therefore that if whole scheme of reforms is not to be prejudiced at the outset we shall have to reduce the all-India deficit by taking into account for this purpose part of the additional free resources which we shall obtain by adopting a higher rate of exchange. We are also referring to this matter in reply to your telegram of 22nd September.

(*d*) Adoption of parity ratio of Rs. 10 equal to gold (? content of) sovereign, namely rupee, 1 equals 11·30016 grains, fine gold should practically obviate all risk of bullion value of rupee exceeding its exchange value by eliminating possible effect of London-New York cross rate since melting point of dollar is 129·29, *vide* in this connection questions 2670 to 2674 of evidence before Committee.

Para. 3. Adoption of the ratio which we propose will materially facilitate adjustment of trade as early as possible and go a considerable way toward mitigating necessity of further additions to currency.

Para. 4. You will gather from above that we do not share apprehensions expressed by some witnesses as to the effect of high exchange upon India's economic welfare. We do not think that these witnesses have clearly appreciated difference between effects on one hand of a rising or falling exchange and on the other hand of a fixed high or low exchange. We consider correct view is that stated in evidence of Keynes and Sir David Barbour. We would in particular invite attention to concluding portion of latter's Memorandum, Appendix 7, regarding serious danger of linking rupee on to gold through sterling instead of direct. In making this recommendation we have not overlooked the fact that bulk of India's foreign trade is with sterling-using countries. It must not, however, be forgotten that apparent stability would merely be secured with trade carried on with United Kingdom. Validity of rupee fixed permanently in terms of sterling exchange between India and United States would constantly vary until sterling returns to a gold par, and silver coinage exchange with other countries whose currencies were previously based on gold must in any event continue unstable until all the currencies also return to a gold par. In any case, we think the interests of India's population (? on the whole) far outweigh any consideration based on convenience of having complete fixity in sterling as distinct from gold. If, as we recommend, the rupee be ascribed a definite value in gold, then sterling exchange will for practical purposes fluctuate only with dollar sterling exchange, and rupee will, with rehabilitation of pound sterling, regain stability in terms of the latter. Recent events appear to have shown that absolute stability in sterling is impracticable, if not in present conditions actually undesirable. The other solutions, for example, that of Abrahams, submitted to Committee, contemplate an even wider fluctuation in sterling exchange, and are really tantamount to a confession of failure. We think that solution now recommended by us combines a more real stability with maximum possible assurance of convertibility and has, in fact, all the elements of a completely satisfactory permanent system. From such confidential inquiries as we have been able to make, we think business interests connected with external trade would, in view of the experience during the last few months, welcome a definite settlement on these lines.

Para. 5. We (? feel) that above solution and indeed any solution which professes to be permanent must rest on certain assumptions regarding the precious metals, and in particular that substantial proportion of world's gold output will be available for freight movement in settlement of international trade. Until recently we were under apprehension that there was danger *re* imposition of control by the United States, but we are relieved to find from Kent's answers to questions 2809 and 2821 that this possibility may be neglected.

Para. 6. If main principles suggested above be accepted, we consider it most desirable to introduce scheme in full working order at earliest possible date. Problem of doing so has been materially simplified by successive rises of exchange during past five months. Procedure will presumably be as follows :—

(1) We should state our willingness to receive gold at one rupee equals 11·30016 grains, *id est*, acquisition rate for gold to be fixed at this figure, which would not be subject to change of cost of shipment, &c. being on importer as in pre-war days. We discuss subsequently the expediency of going further and abolishing entirely present system of compulsory acquisition by Government.

(2) Currency Act and Indian Coinage Act should be amended so as to alter legal tender value of gold correspondingly allowing a not too long moratorium during which we should allow 15 rupees for any sovereign tendered to us. We think such few gold mohurs as may now be in circulation should be accepted permanently at Rs. 15.

(3) So long as acquisition system remains, minimum selling rate for gold sales should be reduced possibly by stages to new legal value, *i.e.*, 10 rupees to sovereign.

(4) So long as you are not obliged to sell Councils to place yourself in funds, minimum rate for Councils (? should be) based on real upper gold point, namely, legal tender rate plus premium on gold as compared with sterling plus incidental charges. Above this rate, which would necessarily vary from time to time with reference to these factors, you would be prepared to sell freely. You would only be prepared to sell below minimum so arrived at when your treasury position pointed to necessity for this.

(5) Question of Reverse Councils presents some difficulty as theoretically it might be argued that real lower gold point should be adopted, *e.g.*, figure below 2*s.* parity representing cost of procuring gold in India and shipping parity to London. This, however, involves many complications apart from making margin between upper and lower gold points unnecessarily wide, and for practical purposes we think it would be sufficient to adopt arbitrary point below 2*s.* for (corrupt group) 23½*d.* for reverse telegraphic transfers representing approximately incidental charges only.

7. Above measures appear to be integral part of scheme adumbrated by us, which is a matter of first importance though not absolutely essential to scheme, we consider it very desirable to remove at earliest date practicable present restrictions on import of gold and silver. In the case of gold this might be done as soon of our sales have reduced premium within measurable distance of new legal tender rate suggested. Same opportunity might be taken to remove prohibition on import of silver. We recognise disadvantage of possible effect on price of silver of competition by private purchasers for India, but we consider that this would be more than set off by immediate sentimental advantage of removal of (restrictions and ultimate reduction in) demands on us for silver in form of coined rupees. We should prefer to defer question of possible removal of import duty on silver until result of general measures advocated has been observed.

(b) Telegraphic Correspondence between the Secretary of State and the Government of India on the Subject of Sales of Gold in India.

From Government of India to Secretary of State, dated 29th September 1919.

1. At gold sale held on 17th September, tenders for 396,640 tolas were accepted at average rate of Rs. 24. 10, minimum rate of successful tenders being Rs. 24. 8. Reason for accepting more than minimum amount notified was the very large number of tenders at Rs. 24. 8, and fact that minimum amount could not be made up by accepting only small tenders at that rate. For next sale minimum tender has been raised to 1,000 tolas in view of great difficulty of making deliveries of smaller amounts with sufficient expedition. Tenders were made in all nine provinces, the greatest number being in Bombay.

2. Market quotation for country bar gold in Bombay is now in neighbourhood of Rs. 25. 4, to which level it has gradually sunk from Rs. 32. 4 previous to first announcement. Difference between market quotation and average rate obtained at sale is reasonable as there is necessarily a little delay in taking and giving delivery.

3. It is no doubt the case that if the sales were suspended market price would rapidly recover. But if, as we hope, we shall be able to continue at least present amount of bi-monthly sales it seems probable the price will move down to the old parity of Rs. 15 to sovereign rather more quickly than we had originally anticipated. Such acceleration would probably be due in some measure to fact that probably public now realise probability of more gold coming to India under present acquisition terms and of our stocks also being replenished from remittances by you.

4. With this probability before us, it seems desirable to be prepared for contingency that at some sale in not distant future, the whole offer may not be taken up at the minimum rate corresponding to Rs. 15 to sovereign, namely Rs. 23. 14. 4 per tola. We should be glad, therefore, of intimation at your early convenience as to action which you would desire to see followed when that contingency occurs. The following appear to us to be main considerations upon which such policy should be based.

5. One possible course would be to continue bi-monthly offer of gold at that minimum, object being to keep gold down to present legal tender of parity. It appears to us that only justification for such a course would be possibility that rate of Rs. 15 to the sovereign is likely to become real again in reasonably near future. If this is not probable, then such a course involves the continuance for indefinite period of the present anomalous and unsatisfactory position regarding gold and would not go far toward preparing the way for the permanent arrangements which may ultimately be adopted.

6. On the other hand, if we sell below Rs. 15 parity, we shall be making a loss on our sales as compared with rate at which gold is held in our Paper Currency Reserve. We think sufficient answer to this objection is that we shall merely be anticipating the writing down, which we shall have to undertake in any case as recognised by you in your telegram of 22nd September regarding so-called gain by exchange, which we are considering separately. Moreover, as regards these particular gold sales we are placing in suspense amounts received

in excess of Rs. 15 parity. Further, provided that price realised is above cost to us of gold acquired on import, we should similarly place in suspense difference between acquisition rate and value at which credit is taken for such gold when placed in the Paper Currency Reserve.

7. A possible and very important result of allowing price to fall below Rs. 15 parity may be to cause sovereigns to emerge from hoards for tender to us at Rs. 15 to the sovereign. The loss to us at having to honour these for some period would, we think, be more than counterbalanced by serious discount which would be placed on hoarding.

8. If we have appreciated correctly trend of events during past few months, it is in highest degree improbable that exchange value of rupee will again fall to present legal tender rate of sovereign, and it appears inevitable that latter must in due course be placed on a new basis as it seems impossible to contemplate any permanent or quasi-permanent solution in which legal tender rate does not correspond to actual facts.

9. We think, therefore, that there would be great advantages in allowing internal price of gold to fall at any rate until it coalesces with our acquisition rate. We realise that this will mark publicly the fact that legal tender rate is obsolete, but we see no disadvantage in recognising this fact. Any arrangement must of course be provisional until it is known what new legal tender rate Currency Committee will recommend, but final decision would presumably not have been prejudiced and indeed transition basis would, we think, have been facilitated if in the meantime minimum rate for sales had been allowed to fall to acquisition rate of currency at the time. We suggest that in the event of occurrence of contingency referred to in para. 4 you should authorise us to proceed on these lines.

From Secretary of State to Government of India dated 8th October 1919.

Your telegram dated 29th September. Sales of gold.

1. The disappearance of the premium on sovereigns, so far from being a matter for regret, seems to me an advantage. It removes the one obstacle, viz., the excessive demand for them as represented by excess of bazaar price over statutory price which for some time has rendered it impracticable to use them for their main currency purpose, that is to say, the encashment of notes, while it sets up no new obstacle. To go below the rate of Rs. 15 at the present juncture, and specially before the Currency Committee has reported, would raise some very difficult questions. The right course seems to be to continue fortnightly sales during the rest of the three months to which your announcement refers, in spite of the fact that the price realised is the bare minimum.

2. I think, however, that a time may come either at the end of the three months or perhaps earlier if there is no substantial demand at one or more of your fortnightly sales when the procedure should be changed. You might then make an announcement to some such effect as following :—

"As the demand for gold bullion at or above the parity of Rs. 15 to the sovereign has been temporarily satisfied, and the future price of gold is uncertain, the Government of India do not propose to continue the periodical offer of stated amounts of bullion ; but in order to meet the demand for the arts and other purposes, gold bullion will be issued on demand at currency offices at a rate corresponding to Rs. 15 to the sovereign."

3. You would, of course, be ready at any time to use sovereigns at that rate towards meeting the public demand for metallic currency. The consequent reduction of the drain of rupees during the busy season would be valuable.

4. I take the opportunity of drawing your attention to a special point which may be of use in present or subsequent discussion. While you have no doubt long seen that during present difficulties the use of sovereigns as currency to supplement rupees as in preceding paragraph will be a great boon, you may not have noticed that, if not used as equivalent of Rs. 15, they would for considerable time not be usable as currency at all. For, if ratio were reduced by statute to, say, Rs. 12, it would be necessary during a period of grace extending over several months to undertake to receive sovereigns at old ratio so as to protect existing holders. During this period the sovereigns held by you could obviously not be paid out at the new lower ratio. Thus an important part of your metallic resources would be useless for a period which might possibly be one of heavy demand for metallic currency, leading to inconvertibility if at that time you had to rely on silver alone instead of silver *plus* gold. You will note important bearing of this on matters discussed in preceding paragraphs.

From Government of India to Secretary of State dated 16*th October* 1919.

Your telegram of the 8th instant. Sales of Gold. We entirely concur that disappearance of premium on sovereign is highly desirable. We should indeed have been disappointed if this result, which is one of the main objects of our sales was not on the way to being attained.

Para. 2. Owing to increased internal demand due to fall in price resulting from our first two sales, market price has subsequently advanced above figure mentioned in paragraph 2 of our telegram of September 29th and at the beginning of this month had again reached the neighbourhood of Rs. 27 per tola, being now slightly below that figure. Minimum price at which tenders were accepted at sale of October 6th, details of which will be separately

reported to you, was Rs. 25. 8 as. This temporary reaction, however, does not affect main question at issue except that the contingency referred to in paragraph 4 of our telegram of September 29th may possibly be rather further off than we had then contemplated.

Para 3. Whenever that contingency arises, we think as an interim measure pending decision as to permament ratio between gold and rupee procedure outlined in paragraph 2 of your telegram would be suitable. In view, however, of rapidity with which conditions are changing, we should prefer to defer final opinion thereon until position there contemplated is actually at hand. For example, actual procedure to be followed must in some measure depend upon the amount of gold then held by us or in sight. Meanwhile, until then you will probably agree that we should continue periodic sales on present procedure beyond the three months already notified so long of course as these are being effective at or above Rs. 15 parity. It seems clearly desirable not to let price recover substantially once that parity has been actually reached. In fact we may find it advisable as time goes on to recommend to you increase of our bi-monthly offer in order to accelerate disappearance of premium.

Para. 4. While, however, sale of gold bullion apart from its sentimental effect must in our opinion re-act directly on demand for rupees vide paragraph 6 of our telegram 196 F dated August 2nd, and thereby greatly assist our rupee position, practical experience of past two years does not incline us to place much reliance on use of gold coins as currency during present period of transition and until uncertainty in mind of public as to future is removed. See also last sentence of our telegram of August 2nd. Although our sales may result before long in practical disappearance for the time being of premium of over 15 rupees parity, we are very doubtful whether internal demand for gold which has remained unsatisfactory for several years will by then have been sufficiently assuaged to afford ground for hope that sovereigns would be used to any appreciable extent as medium of exchange. Further, in view of practical certainty that new legal tender ratio for sovereign will be established in near future, we feel that action of Government in issuing sovereigns as equivalent of Rs. 15 will be liable to misconstruction. We shall, however, bear in mind that point mentioned in your paragraph 4. Necessity of moratorium has also been realised by us vide our telegram of the 11th instant containing our final recommendations to the Currency Committee.

APPENDIX XXX.

REPORT

ON THE

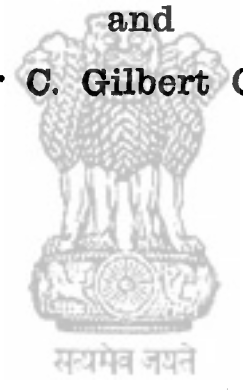
WORLD'S PRODUCTION OF SILVER.

By

Professor H. C. H. Carpenter, F.R.S.,

and

Professor C. Gilbert Cullis, D.Sc.



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A.—INTRODUCTION.

When undertaking the preparation of this Report on the Production of Silver, the Authors received the following instructions from the Secretary of State for India:—

> "The Secretary of State desires to be supplied with a report as to the amount of the output of silver during recent years in the various silver-producing countries, the prospects (so far as they can be estimated) of future output, and the causes by which future output is likely to be influenced.
>
> "Among the points to be dealt with if information is obtainable are: (1) the proportion in which silver is produced respectively from mines worked entirely or mainly for silver and from those worked largely for lead, zinc, copper, &c.; (2) the extent to which the output of silver is likely to be influenced by variations in its price and in that of the metals with which it is associated; (3) the stages through which silver passes on its way from the mine to the user and the extent to which, through the possession of smelting works, particular countries naturally or necessarily acquire or handle the silver produced in other countries."

So far as time and opportunity have offered, information has been assembled concerning all the various matters referred to in these instructions. But the inquiry has proved to be almost unlimited in its scope, and for the want of time or because of the lack of certain sources of information, which seem not to be available in this country, some of them have been less fully dealt with than could be desired. It is hoped, however, that the major facts have been presented and that these, together with the conclusions inferred or deducible from them, will substantially serve the purposes for which the Report is required.

The subject matter is presented in five main sections, dealing severally with the raw materials from which silver is obtained, the location and quantitative importance of the centres where silver-bearing ores are mined, the processes involved in the extraction of silver, the distribution and relative importance of the centres where silver is refined, and conclusions affecting the supplies and prices of silver. The first and second sections have been prepared by Professor Cullis, the third and fourth by Professor Carpenter, while the fifth has been drawn up by the Authors conjointly.

B.—THE ORES FROM WHICH SILVER IS OBTAINED.

Silver is mainly obtained as a by-product from mines which are worked primarily for some other metal or metals. Relatively few mines are worked solely or essentially for silver, and only a small proportion of the world's supply has of late years been derived from them.

The more important economic metals with which silver is most commonly associated are gold, copper, lead, and zinc. These five metals tend to be gregarious; where one is found some or all of the others are usually found also. Many deposits contain all five, and still more contain two, three, or four of them. Deposits yielding only one of them are comparatively rare. Silver is also found with tin, as in Bolivia, and with nickel and cobalt, as in Ontario; but such cases are uncommon, whereas the association with gold, copper, lead and zinc is practically universal

Although, in different regions or in different parts of the same region, copper, lead, zinc, silver and gold are found in a great variety of combinations, certain of these are particularly common. Thus gold and silver almost invariably occur together, either with or without base metals. Again, lead and zinc nearly always accompany one another, and ores carrying these two metals, notably those in which lead predominates, are often richly argentiferous, lead and silver forming an especially characteristic association. Copper in like manner is usually accompanied by small quantities of gold or of both gold and silver.

The presence or absence of base metals in silver-yielding ores is of practical importance since it determines a diversity in their metallurgical treatment, and occasions their classification into two groups, known respectively as milling ores and smelting ores.

The milling ores include those in which the values are entirely or mainly in precious metal. Some of them contain silver to the complete or almost complete exclusion of gold. These are the true silver ores. Others contain both silver and gold, and are silver-gold or gold-silver ores according to their values in the two metals. The gold-silver ores pass into the gold ores proper in which gold occurs in excess of silver, not only in value but also in quantity. The true gold ores, however, invariably carry more or less silver, and the total content of silver in the mill bullion obtained year by year from gold mines is very considerable. For the gold ores of the Transvaal alone it approximates to 1,000,000 ounces annually. Even the placer gold, won from alluvial gravels, although as a rule less argentiferous than lode gold, carries a little silver, and the aggregate yield of silver from this source is of some importance.

In the milling ores the gold and silver-bearing minerals are very generally enclosed in a matrix of quartz or other siliceous matter. They are consequently spoken of collectively as the siliceous ores of the precious metals. They are also called dry ores to distinguish them from the smelting ores, these latter being designated wet ores because the molten lead or copper, freed from them in smelting, acts as a liquid bath in which the gold and silver collect.

The silver in these dry or siliceous ores occurs as larger or smaller particles of definite silver minerals, of which the most important are native silver, cerargyrite (horn-silver), and embolite — the chloride and chloro-bromide respectively — argentite (silver glance) — the sulphide—and proustite (light ruby silver), pyrargyrite (dark ruby silver), stephanite (brittle silver), and polybasite—the double sulphides of silver and arsenic or antimony. If gold be present the silver may occur also, or only, in combination with it in native gold—the natural gold-silver alloy—or as one or more of the gold-silver tellurides.

The particular mineralisation of the ore is not a matter of merely academic interest, because it affects the method and cost of beneficiation, the arsenical and antimonial ores, and especially those which contain admixed oxide of manganese, being rebellious and difficult or even impossible to treat economically. In numerous silver mines in the Western States, Mexico, and South America, considerable bodies of rebellious manganese-silver ores have been left unmined pending the solution of the so-called "manganese-silver problem."

The silver tenor of the dry or siliceous ores varies widely. In the high-grade silver ores, such as those originally worked at Cobalt, in Mexico, Peru or Bolivia, it may run to several thousand ounces to the ton of ore, whereas in the low-grade ores, which are generally encountered sooner or later in depth, it may not be more than two or three ounces, or in gold ores not more than a fraction of an ounce, to the ton. The particular limit below which profitable silver recovery is no longer possible will vary in different districts and mines according to operating costs and metal prices. An increase in costs or a fall in metal price will raise the minimum tenor for paying ore, while, conversely, a reduction in costs or a rise in metal price will lower it, and will bring within the category of ore material that previously was valueless rock.

The smelting ores are those in which the dominant values are in base metal. They are known severally as copper, lead, zinc, and mixed or complex ores. Those ores which contain over 2½ per cent. of copper—or less in the case of certain very large and cheaply mined deposits—are conventionally classed as copper ores, those with over 4½ per cent. of lead as lead ores, and those with 25 per cent. or more of zinc as zinc ores. Straight zinc ores are comparatively rare, and have hitherto yielded but little silver, and for the sake of simplicity they are here classed with the mixed ores.

These conventional percentages are not fixed and invariable. They express approximately the minimum content of the several metals which can be profitably extracted by the practice of the day. The prevailing tendency, resulting from continual improvements in the methods of mining, ore-dressing and smelting, is for these limiting values to be reduced, a tendency which results in material continually becoming available for metal which previously was of too low grade to be worked with profit.

The mixed or complex ores are classified as lead-zinc, zinc-lead, copper-lead-zinc, &c., according to their relative metal values. Since values in several metals are available in ores of this class, the percentage of each of them sufficing for profitable exploitation may be a good deal lower than is requisite in the case of the straight ores.

Practically all of these base metal ores carry at least small quantities of silver and gold. Occasionally the value in precious metal is in excess of that in base metal. The ores are then described by such terms as silver-lead, silver-lead-zinc, silver-zinc, gold-copper, &c. Ores of this type are of great importance as producers of silver and gold, and the mines from which they are obtained are often loosely spoken of as silver or gold mines, as the case may be, notwithstanding the fact that the ore is of base metal type and has to be treated by smelting methods.

In the base metal ores the silver is generally included invisibly in the minerals of copper, lead, or zinc, but in the richer grades it may also occur as separate and visible particles of one or more of the silver minerals already mentioned.

While the silver tenor of base metal ores may at times be very high, it commonly ranges from 2 or 3 to 10, 20, or even 50 ounces to the ton. On the other hand, it is not infrequently quite low, and may be so low as to be beyond the limits of profitable recovery, when the silver is said to be "without commercial value."

It follows from what has been said that in the mining and metallurgical industries it is customary to classify the ores from which silver is obtained in the following manner:—

A. Milling ores, or precious metal ores proper:
   I. Dry or siliceous ores.

B. Smelting ores, or base metal ores:
   II. Copper ores.
   III. Lead ores.
   IV. Mixed or complex ores.

The ores in Group I. are mined very largely for their gold, those in Group II. primarily for their copper, those in Group III. chiefly for their lead, and those in Group IV. principally for two or more of the metals, copper, lead and zinc. In but few of them is silver their principal product. A large proportion of the mines from which silver-bearing ores are raised would be incapable of profitable operation if they depended solely upon their output of silver, and the silver which they contain would not be forthcoming if the mines could not be worked for some other metal or metals in the first place. The production of silver is therefore largely

ancillary to and dependent upon that of gold, copper, lead and zinc, and any causes which affect the production of these will also affect the production of their silver by-product.

The demand for these metals will, to a large and probably growing extent, control the future supplies of silver. This is a fact of fundamental importance, and an attempt has here been made to estimate numerically the relative importance of the several classes of ore as silver producers. A computation has been made from the output figures for 1912. For the United States and Canada the accurately determined proportions given in official publications relating to that year were taken, but for other countries assumptions were made, based upon a knowledge of the silver-yielding ores in each case. The following results were obtained:—

Class of Ore.	Percentage of World's Production.		Class of Ore.
Lead ores	32		
Copper ores	23	65	Base metal ores.
Mixed ores	10		
Dry or siliceous ores. Ores of gold and silver	15		
Ores of silver	20	35	Precious metal ores.
	100	100	

An estimate by Von Bernewitz gave 70 per cent. for base metal ores and 30 per cent. for precious metal ores, and the truth probably lies between the two estimates.

From these figures it appears that, broadly speaking, about two-thirds of the world's silver in 1912 was obtained from base metal ores and one-third from precious metal ores. Further, only one-fifth, or 20 per cent., was obtained from mines worked exclusively for silver, while four-fifths, or 80 per cent., was derived as a by-product from mines which were worked primarily for one or more of the metals, gold, copper, lead and zinc, and which would not have been in operation if their silver had been the sole metal output.

Formerly the base metal ores were less important and the precious metal ores more important. The tendency during the last few decades has been for the proportion of silver obtained from ores of the first class to increase and for that obtained from ores of the second class to decrease, and, except that the recent rise in the price of silver may for some years favour the silver mines proper, the tendency is likely to continue.

The recovery of silver from as many types of ore, by giving to production a broad foundation, safeguards supplies. In this respect the production of silver is more secure than that of gold, which depends as to about 80 per cent. upon gold ores proper and as to only 20 per cent. upon ores worked for other metals.

C.—WORLD'S PRODUCTION OF SILVER BY CENTRES OF MINING.

(Mine Production.)

Since so few mines are worked solely for silver, and so much silver is obtained as a by-product in the winning of gold, copper, lead, zinc, tin, &c., complete statistics as to the production of this metal are unusually difficult to obtain.

A comparison of the figures published, even by those authorities most favourably placed for obtaining official information, reveals remarkable discrepancies. These are sometimes inexplicable, but they seem in the main to be due to three causes:—

(*a*) Variations in estimates relating to producing centres for which no accurate records are kept.

(*b*) Quotation indiscriminately of figures collected either from the mines directly, the amount of recoverable silver being calculated from the alleged ore-contents, or from refineries, smelteries, and other reduction-works, the silver recovered being assigned as far as possible to places of origin; it cannot be expected that the figures obtained in these two ways can agree very closely.

(*c*) Confusion between mine production and refinery production, *i.e.*, between returns expressing the silver contained in the ores raised in a country, and returns representing the silver metal extracted in that country; in some cases these may be approximately identical, but in others they are very different either because ore is exported and its silver recovered in some other country, or because silver may be produced from ore imported from outside.

As the exact significance of figures quoted is frequently not stated, it follows that a great many results may be obtained in statistical tables by assembling heterogeneous data. Apparently most of the published compilations are more or less vitiated in this way.

Under the circumstances the best that can be attempted is to furnish data which express the broad facts of the case. That is all that is claimed for the figures here supplied, but an endeavour has been made to give in this section homogeneous figures relating to mine production, the object being to make clear where and in what relative amounts the silver-bearing ores occur and are mined. Data relating to refinery production are given in a later section of the Report.

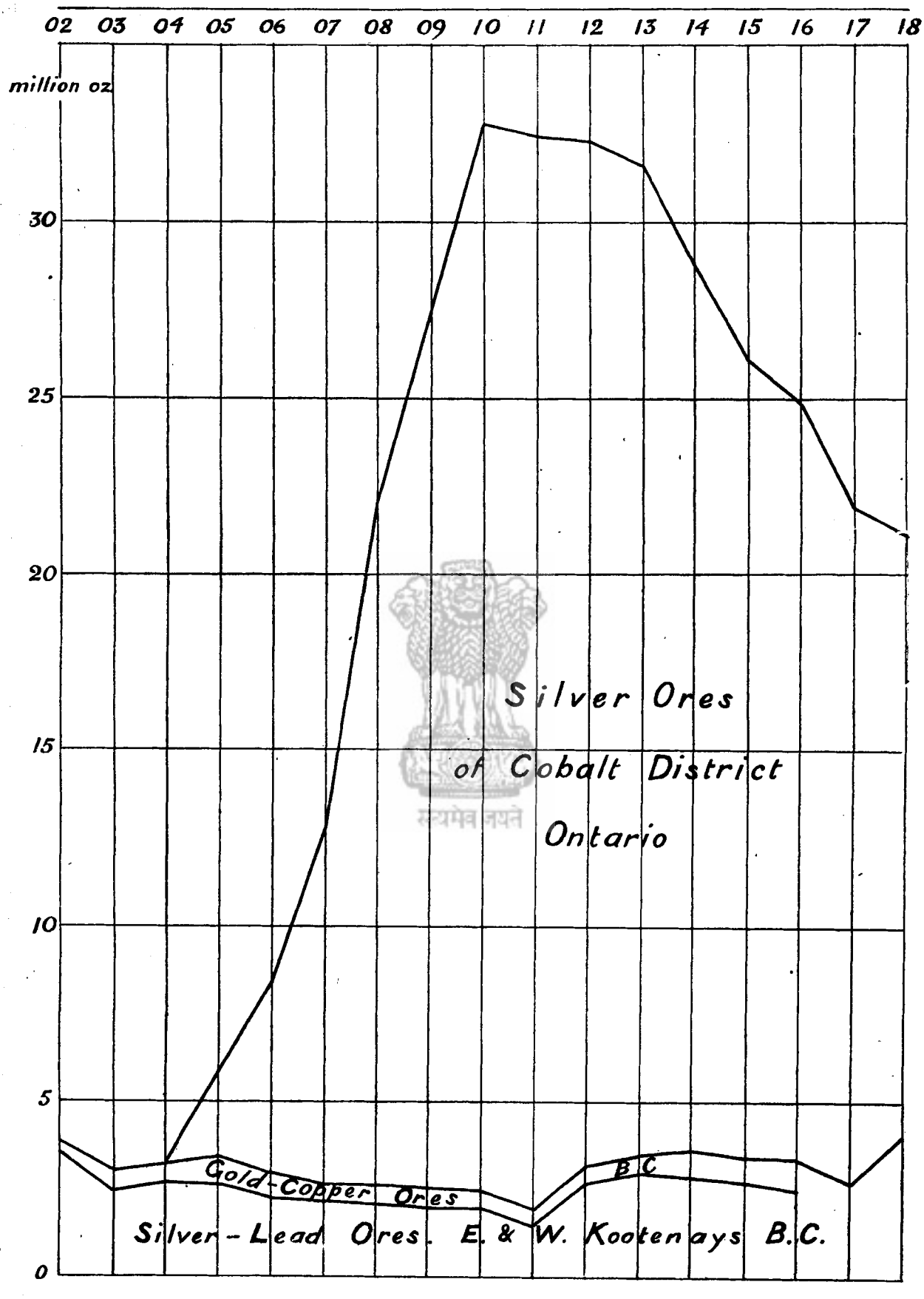


DIAGRAM 1.—MINE PRODUCTION of SILVER in CANADA by CLASSES of ORE.

North America.

In normal times the North American continent yields three times as much silver as all the others. The output of the mines of Canada, the United States, and Mexico, amounts to three quarters of that of the world.

Canada:

The Canadian supplies, though smaller than those from the United States and from Mexico, are nevertheless of great importance. They are obtained mainly from Ontario and British Columbia, but minor contributions are also made by Quebec and the Yukon. Thus in 1912 the total Canadian output was close upon 32,000,000 ounces, and of this amount more than 29,000,000 ounces came from the Ontario mines, and over 2,500,000 from those of British Columbia, the combined contributions of Quebec and the Yukon being less than 100,000 ounces.

The Ontario silver is almost exclusively derived from the true silver ores of the Cobalt field, the mines ranking among the most important now being worked primarily for silver. Small quantities are also recovered from the gold ores of the Porcupine and other goldfields, and from the copper-nickel ores of Sudbury.

The British Columbia silver is obtained, as to about 75 per cent., from silver-lead ores, notably those of the Slocan and other districts in the East and West Kootenays, and as to the remaining 25 per cent., from the copper ores of the Rossland, Boundary, and Coast mines. An additional supply is foreshadowed from a district north of Prince Rupert where silver-bearing ores are reported to have been discovered in important quantities.

The Quebec silver is recovered from pyritic copper ores mined in the Eastern Townships, and from zinc-lead ores worked in Portneuf county. Of the Yukon silver about a third is derived from placer gold and two-thirds from copper and high grade silver-lead ores. During 1917 and 1918, silver production began in a small way in Alberta, Manitoba, and New Brunswick.

From 1887 to 1894, the annual Canadian production was under 1,000,000 ounces. From 1895 to 1904, it ranged between 3,000,000 and 5,000,000 ounces, the increase having been due to the discovery and development of the silver-lead ores of British Columbia. In 1903 the Cobalt field was discovered and from that time the output rapidly increased to nearly 33,000,000 ounces in 1911, the highest yet attained by Canada. Since then a decline has set in, owing to a reduced output from the Cobalt field, which appears to have passed its zenith. If the 1912-18 rate of decline should continue, which is improbable now that the price of silver has recovered, production from this field would cease about 1927.

The annual output from the producing Provinces and from the Dominion as a whole since the beginning of the century is given in the following table which is taken from the "Annual Reports on the Mineral Production of Canada":—

Production of Silver from Domestic Ores of Canada (in fine ounces).

Year.	Ontario.	British Columbia.	Quebec.	Yukon.	Total.
1900	161,650	3,958,175	58,400	290,000	4,468,225
1901	151,400	5,151,333	41,459	195,000	5,539,192
1902	145,000	3,917,917	42,500	185,900	4,291,317
1903	17,777	2,966,204	28,600	156,000	3,198,581
1904	206,875	3,222,481	15,000	133,170	3,577,526
1905	2,451,356	3,439,417	19,620	89,630	6,000,023
1906	5,401,766	2,990,262	17,686	63,665	8,473,379
1907	9,982,363	2,745,448	16,000	35,988	12,779,799
1908	19,398,545	2,631,389	13,299	63,000	22,106,233
1909	24,822,099	2,649,141	13,233	45,000	27,529,473
1910	30,366,366	2,407,887	7,593	87,418	32,869,264
1911	30,540,754	1,887,147	18,435	112,708	32,559,044
1912	29,214,025	2,651,002	9,465	81,068	31,955,560
1913	28,411,261	3,312,343	34,573	87,626	31,845,803
1914	25,139,214	3,159,897	57,737	92,973	28,449,821
1915	22,748,609	3,565,852	63,450	248,049	26,625,960
1916	21,608,158	3,392,872	98,610	360,101	25,459,741
1917	19,301,835	2,655,994	136,914	119,605	22,221,274
1918	17,109,389	3,965,828	147,316	48,041	21,284,607

The relative importance of the three principal classes of ore from which Canadian silver is obtained is graphically represented for the years 1902–18 in diagram 1. Canada is at the present time the only country in which the output of silver from mines worked exclusively for silver largely preponderates over that obtained from mines worked primarily for other metals. It is passing through the phase which characterised Mexico, Peru, Bolivia, and Chile in former days. Of other countries Mexico approximates most closely to Canada in this respect.

The present improved price of silver should have a particularly favourable effect upon production in such countries, by making possible the beneficiation of low-grade silver ores which could not be exploited at a profit while the price was depressed. It may be expected to check the decline in output from Cobalt and prolong the life of the field. Owners of many old properties which have been closed for years are planning to resume operations.

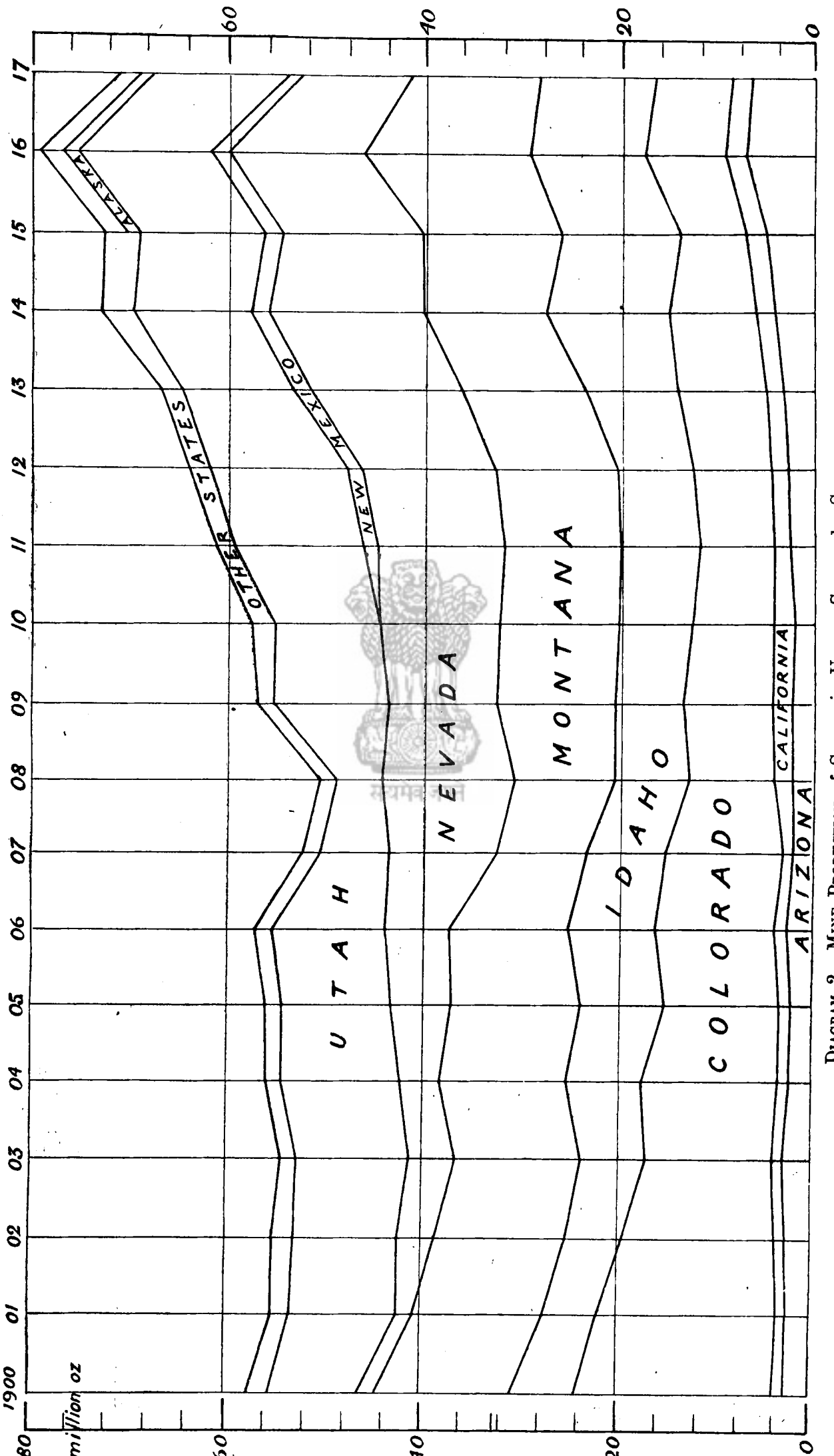


DIAGRAM 2.—MINE PRODUCTION of SILVER in UNITED STATES, by STATES.

A new silver field containing true silver ores and richly argentiferous copper and lead ores has been discovered in the Alice Arm and Bear River districts of British Columbia at the head of Observatory Inlet, and about 100 miles north of Prince Rupert. In 1916, the district was examined for the Dominion Government by Professor J. M. Turnbull, who reported it to hold out excellent prospects for future production. A considerable output of silver is stated to be practically assured already. Many properties are being opened up, and facilities for the transport of the ores to tide-water are being developed. The chief production is expected to come from rather large ore-bodies of medium to low grade in silver. It is hoped that the silver output from this field will more than compensate for any decline that may occur in that from the Cobalt field. The shipping of ore on a considerable scale is expected to begin this year. The district forms part of a large mineral region, extending northwards into the Yukon and Alaska, in which deposits of gold, gold-silver, silver-lead, gold-copper, copper, and silver ores occur, some of which are already in process of exploitation.

Formerly the Canadian silver-bearing ores were exported to the United States for metal extraction; but of late years they have to a large and growing extent been treated within the Dominion. Most of the Yukon and Quebec ores are still exported, but practically all the British Columbia ores are now smelted at Trail, Granby, and elsewhere in that Province, and the larger part of those raised in Ontario are made to yield their silver at or near the mines. Thus in 1918, about 84 per cent. of the silver contained in Ontario ores was extracted in Ontario, and only some 16 per cent. in the United States.

United States:

The large scale production of silver in the United States may be said to date from 1859, when the working of the celebrated Comstock lode began. From that time it has constituted a high proportion of the world's output, and since 1912 has been larger than that of any other country.

The bulk of the silver has come from eight of the Western States—Arizona, California, Colorado, Idaho, Montana, Nevada, New Mexico and Utah—none of which produces less than 1,000,000 ounces annually. Recently, Alaska also has been making important contributions.

The relative importance of the most productive States is indicated in the following table which has been compiled from the "Mineral Resources of the United States," published annually by the United States Geological Survey, and relates to the years 1912 and 1917. Only those States yielding more than 500,000 ounces per annum are separately specified :—

Production of Silver from Domestic Ores of the American States (in fine ounces).

	1912.	1917.
Alaska	515,186	1,239,150
Arizona	3,490,387	6,983,913
California	1,300,136	1,775,431
Colorado	8,212,070	7,304,353
Idaho	8,294,745	12,029,338
Michigan	528,453	688,551
Montana	12,731,638	13,128,142
Nevada	14,369,063	11,269,969
New Mexico	1,536,701	1,394,365
Texas	406,067	595,789
Utah	13,835,903	13,479,133
Various	821,157	717,397
	66,041,506	70,665,531

The annual production of silver in the United States as a whole since 1900—including that from the Philippine Islands and Porto Rico since 1907—is indicated by the following figures, also taken from the "Mineral Resources of the United States." The figures in the first column are the totals collected by the Geological Survey from the mines direct, while those in the second column are the totals assembled by the Mint from the metallurgical works in which the silver is extracted :—

Production of Silver from Domestic Ores of the United States (in fine ounces).

	Mine Figures.	Mint Figures.
1900	—	57,647,000
1901	—	55,214,000
1902	—	55,500,000
1903	—	54,300,000
1904	55,999,864	57,682,800
1905	56,272,496	56,101,600
1906	57,362,455	56,517,900
1907	52,500,104	56,514,700

Production of Silver from Domestic Ores of the United States (in fine ounces)—continued.

	Mine Figures.	Mint Figures.
1908	50,878,140	52,440,800
1909	57,315,677	54,721,500
1910	57,598,509	57,137,900
1911	61,108,791	60,399,400
1912	66,041,506	63,766,800
1913	71,200,237	66,801,500
1914	69,633,769	72,455,100
1915	72,368,878	74,961,075
1916	78,875,176	74,414,802
1917	70,665,531	71,740,362
1918	71,740,000	—

The mine figures are expressed graphically in diagram 2, which also indicates the annual production of each of the most important States over a similar period. With the exception of a drop in output during 1907 and 1908—attributable to a falling off in the supplies from Utah—the production was maintained at about 56,000,000 ounces during the first ten years of the period, and from 1910, it steadily increased to nearly 79,000,000 ounces in 1916, since when there has been a slight decline. The magnitude of the output for 1916 is mainly due to an increased production of the base metals copper, lead, and zinc rendered necessary by the war, and a concomitant increase in the production of their silver by-product. The subsequent decline is believed to be due to a temporary easing off in copper, lead, and zinc mining, while accumulated surplus stocks of these metals are being absorbed.

The diagram shows how steady, on the whole, the production of the several States has been since the beginning of the century, the only marked variations being a reduction in the Colorado output, which was due to a falling off in the grade of the Leadville ores, and an increase in that of Nevada, which resulted from the discovery, about 1903, and the subsequent development, of the silver-gold field of Tonopah—which, like the Cobalt field of Canada, seems to have now passed its zenith.

The United States silver is obtained from all four of the classes of ore previously defined. In Alaska, the bulk of it comes from copper ores; in Arizona, also from copper ores, notably those of Bisbee and Jerome; and in California from copper ores. In Colorado, siliceous ores are the most productive, but lead ores also are important, the Leadville district still being a large producer. In Idaho, the bulk of the silver is obtained from the lead and lead-zinc ores of the Cœur d'Alene district; in Montana from the copper and other base metal ores of the Butte district. In Nevada, famous for the old Comstock lode, the siliceous silver-gold ores of the Tonopah field rank first; also in New Mexico siliceous ores predominate. In Utah the lead and lead-zinc ores of Park City yield most of the silver; but the copper and mixed ores of Bingham and Tintic are also important. The famous Lake Superior copper ores of Michigan, in which the silver is alloyed with native copper, constitute an almost unique type of ore.

The relative importance of the four classes of silver-yielding ores in the United States during the period 1900–17 is shown in graphic form in diagram 3, which is based upon information published by the Geological Survey. When allowance is made for the fact that for certain years the data for mixed ores were included with those for lead ores, it will be seen that while there has been a fair constancy in the relative yields of the several classes, there has been a tendency of late years for the supplies from dry or siliceous ores to fall off and for those from base metal ores to increase. This is brought out by the following percentage figures relating to the years 1912 and 1917:—

Percentage Yield of Silver by Classes of Ore in the United States.

	1912.		1917.	
	Per cent.		Per cent.	
Dry or siliceous ores	40		30	
Copper ores	29		29	
Lead ores	25	60	27	70
Mixed ores	6		14	

In 1912 the silver and gold ores proper yielded 40 per cent. and the base metal ores 60 per cent. of the total silver produced, while at the present time 30 per cent. only is obtained from true precious metal ores and 70 per cent. from base metal ores. The great increase in the silver output of the United States during the past quarter of a century has been intimately connected with the largely augmented production of copper, lead, and zinc.

All of the silver-bearing ores mined in the United States are metallurgically treated within the country of their origin, their recoverable silver being extracted from them as fine metal. Large quantities of ores, concentrates, mattes, precipitates, mill bullion, base bullion, and unrefined base metal are imported from foreign countries, *e.g.*, Canada, Mexico, Central America, Peru, Bolivia, Chile, &c., for treatment, and a quantity of silver approaching or

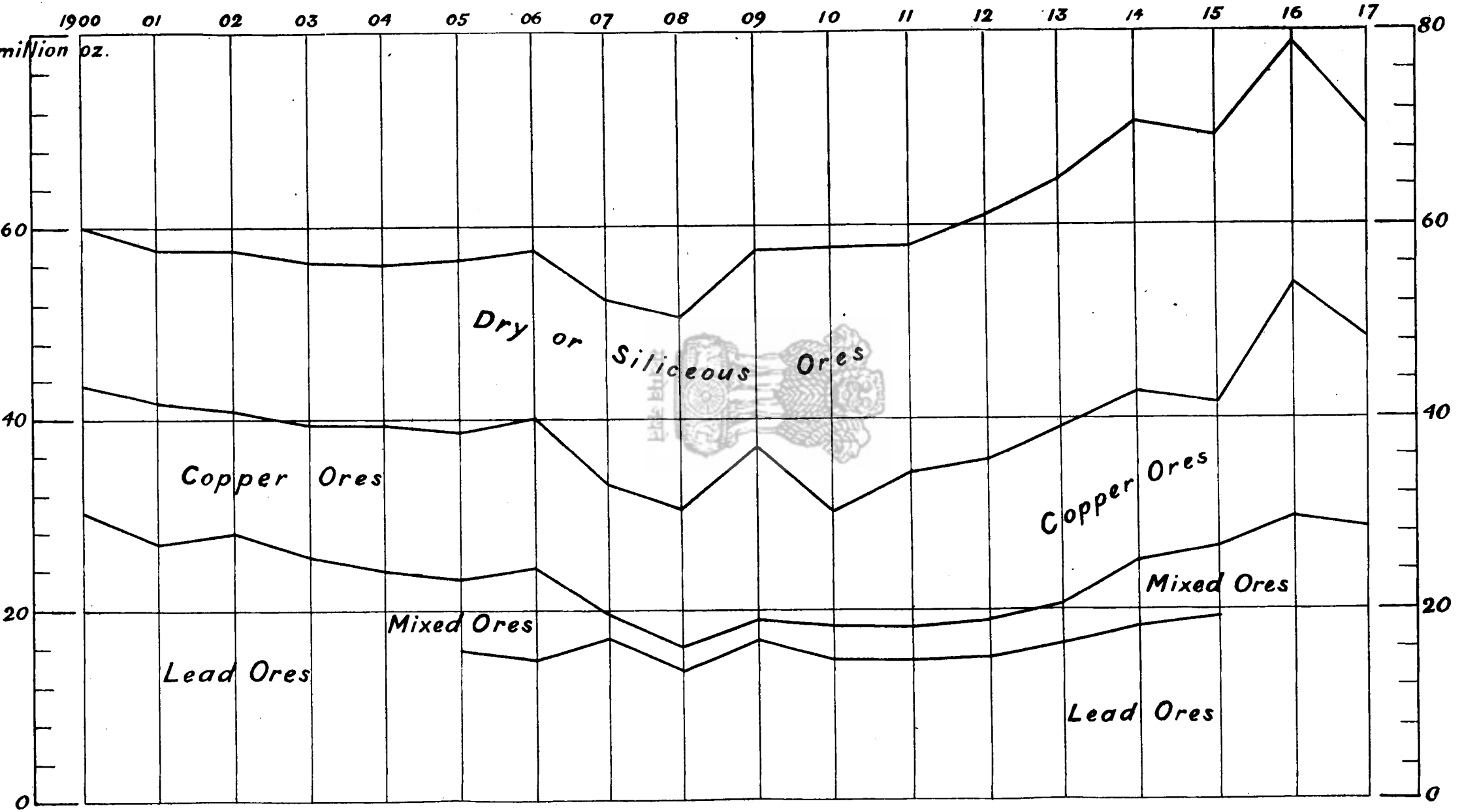


DIAGRAM 3.—SILVER PRODUCTION of UNITED STATES by CLASSES of ORE.

exceeding that won from domestic ores is extracted from these, causing the total production of silver in the United States to amount in some years to nearly two-thirds of the mine production of the world.

Under prevailing conditions, the United States is the great reserve upon which other countries largely depend for their supplies of marketable silver, and in this respect exercises an important control over the distribution of this metal, just as it does over that of copper, lead, and zinc.

Mexico:

Until recently Mexico had long been first among silver-producing countries; but since 1912 the annual production has invariably been below that of the United States, and occasionally below that of Canada as well.

The output figures as given by various authorities, are very conflicting, but during the period 1900–13 a maximum production of about 80,000,000 ounces seems to have been attained in 1911. In 1912 it was close upon 75,000,000 ounces, and constituted 32 per cent. of that of the world. The decreased output of recent years followed upon the outbreak of civil war in 1913, since when the production appears to have fluctuated between a maximum of just under 40,000,000 ounces and a minimum of about 20,000,000.

The silver-bearing ores, though widely distributed throughout the length of the country, are mainly confined to the axial plateau which forms the southern continuation of the highly mineralised region of the Western States of America. Along this belt deposits occur in most of the States from Sonora, Chihuahua, Coahuila, and Durango, in the north; through Jalisco, Zacatecas, Nuevo Leon, San Luis Potosi, Guanajuato, Hidalgo, Michoacan, and Mexico in the central region, to Guerrero and Oaxaca in the south. The mines and mining districts are exceedingly numerous, and many of them have been in continuous operation for scores or even hundreds of years.

All the types of silver-bearing ores are worked in Mexico, but data as to the relative importance of the several classes, such as are published in regard to the ores of Canada and the United States, are not available. The dry or siliceous ores, which in the early days were the main or even the only producers, are still very important. They include both silver and gold ores, but taking the country as a whole, the silver yield predominates largely over that of gold. The chief silver fields occur in the Pachuca and Real del Monte districts in Hidalgo, the old Guanajuato district in Guanajuato, the Zacatecas and Sombrerete districts in Zacatecas, the Batopilas, Arteaga, and Parral districts in Chihuahua, that of Tasco in Guerrero, and of Catorce in San Luis Potosi. Of the gold and gold-silver mines, those of El Oro on the confines of the States of Mexico and Michoacan have a world-wide reputation.

Base metal ores have become steadily more important as producers of silver within recent years. They are found both in the deeper parts of the old silver mines and also as separate and distinct deposits. Lead ores rich in silver, or in silver and gold, are particularly abundant and now yield a large, probably the major, proportion of the Mexican silver. They are strongly developed in the northern States, three important districts being Mapimi in Durango, Santa Eulalia in Chihuahua, and Sierra Mojada in Coahuila. Copper ores carrying good values in one or both of the precious metals are also plentiful and have been extensively developed by American enterprise during the last few years. They also occur principally in the north, well-known fields being those of Cananea, Nacozari, and Moctezuma in Sonora, but there are many others. The most famous copper mines are those of Boleo in Lower California, but they yield oxidized ores in the main which carry little or no silver. Large quantities of mixed ores, *e.g.*, copper-lead-silver ores, also occur in Mexico. These are already mined to some extent, but are more important as reserves for future metal supplies.

During the Civil War, the northern States have been less disturbed than those of the centre and south, with the result that production of the base metal ores has been better maintained than that of the true silver ores.

The output of silver from Mexican mines, as given in the "Annual Report of the Director of the United States Mint," and in the Reports issued by the Mines Branch of our own Home Office, respectively, is tabulated below. The serious discrepancies observable in several cases arise from the fact that no regular official records as to mine production are available, the collection of figures from other sources leaving room for a wide divergence in the results obtained.

Production of Silver from Domestic Ores of Mexico (in fine ounces).

	U.S.A. Mint Reports.	Home Office Reports.
1900	57,437,808	61,838,938
1901	57,656,549	47,593,641
1902	60,176,604	46,745,793
1903	70,499,942	60,326,701
1904	60,808,978	51,430,950
1905	65,040,865	75,509,969
1906	55,225,268	88,534,004
1907	61,147,203	78,272,758

Production of Silver from Domestic Ores of Mexico (in fine ounces)—continued.

	U.S.A. Mint Reports.	Home Office Reports.
1908 - - - - -	73,664,027	68,158,392
1909 - - - - -	73,942,432	72,745,540
1910 - - - - -	71,372,194	72,014,564
1911 - - - - -	79,032,440	79,137,872
1912 - - - - -	74,640,300	74,644,919
1913 - - - - -	70,703,828	—
1914 - - - - -	27,546,752	—
1915 - - - - -	39,570,151	—
1916 - - - - -	22,838,400	—
1917 - - - - -	31,214,000	—

The Mexican figures are expressed graphically in diagram 4, in which the data of output for Canada and the United States are also shown for the purpose of comparison.

The following additional figures are taken from the semi-official "Mexican Year Book," and refer, not to calendar years, but to fiscal years ending on June 30th. It will be seen that they are in fair agreement with those quoted from the United States Mint Reports.

Production of Silver from Domestic Ores of Mexico, by Fiscal Years ending 30th June. (In fine ounces).

	Mexican Year Book.		Mexican Year Book.
1900–1 - -	58,303,851	1907–8 - -	69,155,100
1901–2 - -	56,993,077	1908–9 - -	73,696,159
1902–3 - -	65,069,092	1909–10 - -	72,574,220
1903–4 - -	64,730,553	1910–11 - -	74,108,772
1904–5 - -	62,113,318	1911–12 - -	80,173,452
1905–6 - -	59,476,085	1912–13 - -	73,302,000
1906–7 - -	56,478,034		

These last figures have been arrived at by adding together the silver contained in ores and metallurgical products exported, that bought in for coinage, and that retained for use in the Arts. The figures for 1908–09 will serve as an example :—

Fiscal Year 1908–09 (in fine ounces).

Silver exported in ore, cyanides, sulphides and in form of bars -	70,447,048
Bought by Exchange and Currency Commission for coinage -	100,061
Consumed in Arts (estimate) - - - - -	32,152
	73,696,159

These particulars also serve to indicate the large proportion of the silver of Mexican origin which is exported.

The ores raised from Mexican mines, and the crude products obtained by their partial treatment, were at one time very largely exported to foreign countries, *e.g.*, the United States, Germany, Great Britain, Belgium, and France, for silver recovery. But during recent years a growing proportion of the silver has been recovered in the country of origin, either by Mexican metallurgical companies, or by American companies having works in Mexico. Notwithstanding this tendency, however, the export of silver-bearing ores, concentrates, &c., notably to the United States, is still very considerable.

The diminution in the output of silver from Mexico during the last six years has been due to the disturbed state of the country, and not to any failure in natural resources. In 1911, the last year of comparative peace in the country, the silver production was the greatest on record. There can be no doubt that Mexico possesses greater known resources of silver than any other country, and little doubt that, when normal conditions are re-established, the output will once more become the largest in the world. The anticipated continued demand for copper, lead and zinc should stimulate the mining of silver-bearing base metal ores, and the improved price of silver, and of gold—always supposing that working costs do not advance to an equal or greater degree—by lengthening the life of existing or moribund mines, and, by permitting of the opening up of abandoned ones or of hitherto unworked deposits, should lead to a greater production from precious metal mines.

Central America.

The production of silver from the Central American States has ranged during recent years between 2,000,000 and 3,000,000 ounces per annum.

It is obtained almost entirely from the dry or siliceous gold-silver ores. Honduras is the largest producer, the annual output from the Rosario mine of the New York and Honduras

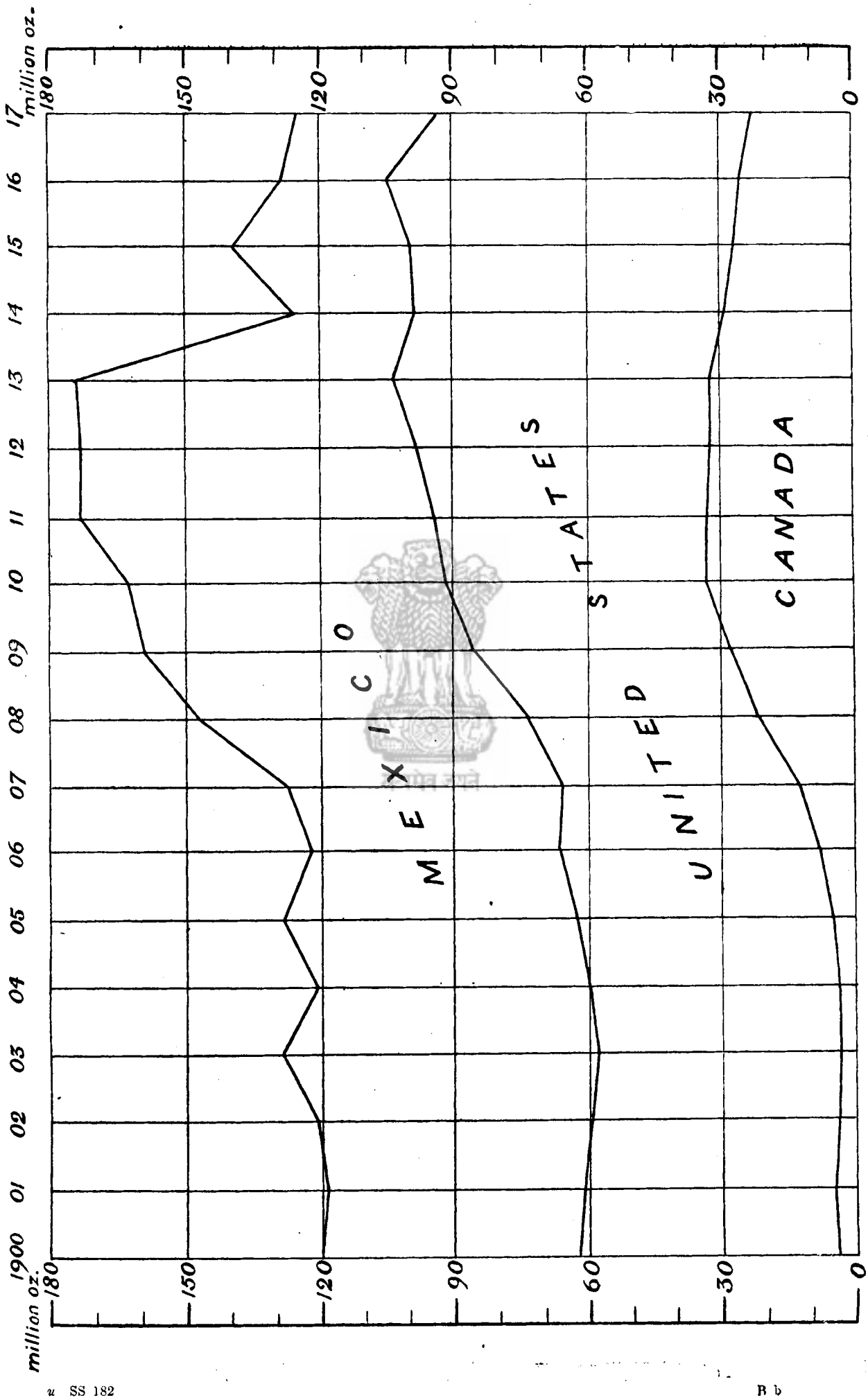


DIAGRAM 4.—MINE PRODUCTION of SILVER in NORTH AMERICA.

Rosario Mining Co. alone having approximated to or exceeded 2,000,000 ounces for some years past. Smaller amounts are also obtained from Costa Rica, Panama, Nicaragua, and San Salvador.

The relative importance of these States as silver producers is indicated by the following figures for 1912, which represent exports, and are taken from the "Report of the Director of the United States Mint":—

Honduras	2,108,813	fine ounces
Costa Rica	578,561	,, ,,
Panama	118,435	,, ,,
Nicaragua	37,231	,, ,,
San Salvador	2,614	,, ,,
	2,845,954	,, ,,

The following figures, taken from the same source, give the annual production in Central America since the beginning of the century:—

Production of Silver from Domestic Ores of Central America (in fine ounces).

1900	1,013,285	1909	2,294,272
1901	879,666	1910	2,026,885
1902	971,320	1911	1,211,747
1903	2,116,063	1912	2,845,954
1904	655,357	1913	2,135,641
1905	1,361,449	1914	2,754,868
1906	1,670,159	1915	2,920,496
1907	1,892,896	1916	2,602,500
1908	1,460,809	1917	2,369,500

The bulk of the mill bullion produced in Central America is exported to the United States, where its contained silver is recovered.

South America.

Peru, Bolivia, and Chile are the only countries in South America which regularly produce more than 1,000,000 ounces of silver a year. In the early years of the century the annual contributions of Colombia approximated to or even exceeded this amount, but during the last decade they have averaged only about half as much. Other and smaller producers are Argentina, Brazil, Ecuador, Uruguay, and Venezuela. The combined yearly output of these, together with that of Colombia, is not at present more than 1,000,000 ounces.

Peru:

Peru is the principal silver producing country in South America. Moreover, among the world's producers, it is at the moment only surpassed by the United States, Mexico, and Canada. The annual production has shown marked expansion during recent years, having increased from less than 5,000,000 ounces at the beginning of the century to nearly 11,000,000 at the present time.

The rich silver ores for which Peru was once famous are now largely exhausted, only a small proportion of the output being still recovered from ores of this kind. But silver-bearing base metal ores are abundant both in independent deposits and in the deeper parts of the old silver mines, and it is from them that by far the greater proportion of the present day yield of silver is obtained. Copper, lead, and mixed ores are plentiful, but so far only the copper ores, which are strongly argentiferous, have been extensively mined. The copper output has advanced remarkably of late years, and Peru is to-day predominantly a copper-producing country, standing fifth among the world's producers of that metal. The same ores as have yielded the increased output of copper have also furnished the augmented output of silver. Peru provides a striking example of the interdependence which exists between the production of silver and that of other metals. Over 85 per cent. of the Peruvian silver is now being won from copper ores. The remaining 15 per cent. comes from silver and lead ores of which the former are the more important.

The production of copper and its associated silver centres in the mines and smelteries of the Cerro de Pasco Copper Corporation in the department of Junin, and of the Backus and Johnston Co. at Casapalca in the department of Lima, but smaller fields occur in other parts of the country notably in the departments of Libertad, Arequipa, Cajamarca, and Ancachs.

The silver mines besides occurring with those of copper in Junin and Lima are situated in Ancachs, Arequipa, Cajamarca, Huanuco, and Huancavelica. The most important are those of Collaracra in Ancachs worked by the Anglo-French Ticapampa Silver Mining Co., and those of Caylloma in Arequipa worked by the Sociedad Explotadora de Caylloma. The famous old mines of Castrovirreyna in Huancavelica are in a condition of complete decadence pending the provision of the capital necessary to work them in depth by modern methods.

The relative importance of the principal producing departments for the year 1917, which is indicated below, emphasises the importance of the argentiferous copper ores of Junin and Lima:—

Production of Silver in the Departments of Peru in 1917 (*in fine ounces*).

Department.	Production.
Ancachs	743,322
Apurimac	36,171
Arequipa	268,501
Cajamarca	233,360
Huancavelica	32,152
Huanuco	59,610
Junin	5,707,912
Libertad	188,989
Lima	3,511,191
Puno	73,050
Others	10,803
	10,865,061

The Peruvian silver production since the beginning of the century is given in the subjoined table, the figures for 1900–02 being taken from the "Annual Report of the Director of the United States Mint," and those for 1903–17 from the "Estadistica Minera del Peru":—

Production of Silver from Domestic Ores of Peru (*in fine ounces*).

1900	7,295,825	1909	6,676,556
1901	3,566,868	1910	8,120,470
1902	4,264,528	1911	9,304,242
1903	5,491,690	1912	10,428,566
1904	5,138,027	1913	9,617,692
1905	6,156,336	1914	9,214,763
1906	7,397,982	1915	9,466,353
1907	6,642,153	1916	10,787,928
1908	6,394,647	1917	10,865,061

Besides the deposits which are being mined at the present time, a number of new or abandoned properties, especially in Southern Peru where mining has lain dormant for more than a century, are now being actively explored. The Andes Exploration Co., of Maine, U.S.A., is systematically prospecting silver-bearing copper deposits at Cerro Verde in Arequipa, and at Tintaya in Cuzco. The latter are expected from surface indications to rank among the largest copper deposits known. At Lampa in Puno copper-silver veins worked by the Lampa Mining Co. of London are being investigated by the Goldfield Consolidated Mines Co. of Nevada with a view to large scale developments.

There is every prospect that with the further introduction of up-to-date methods of mining and treatment, the production of silver from Peruvian ores will continue to expand.

Bolivia:

Formerly the mines of Bolivia were even more productive of silver than those of Peru. Many of them ranked among the most famous in the world. Some are still active, but many are no longer in operation. The deposits occur in the Eastern Cordillera and the most celebrated of the ancient and modern mines are situated in the departments of Potosi, *e.g.*, Cerro de Potosi, Porco, Huanchaca, Chorolque, Chocaya, Colquechaca, &c., and of Oruro, *eg.*, El Socavon, Tetilla, &c., but there are others less well known in the departments of Cochabamba and La Paz.

A peculiarity of the Bolivian deposits is the frequent association of silver with tin. In some of them only silver is found, in others both silver and tin, and in a few only tin. There is a tendency for rich silver ores to occur in the upper parts of the lodes and for tin to come in lower down in increasing amount, in much the same way as in Peru the silver ores of Cerro de Pasco have been found to give place in depth to copper ores. Since the fall in the price of silver there has been a tendency to mine for tin rather than for silver. Not a few of the early silver mines are now producing from their deeper levels more tin than silver, or are even solely tin producers.

Ores of other base-metals besides tin are also found in Bolivia, either in independent deposits or in the deeper zones of the silver deposits. Argentiferous ores of copper, lead and zinc are reported to occur in important quantities, and occasionally attempts have been made, as at the Huanchaca mine, to market them, but their exploitation has hitherto been on a small scale only.

It has not been found possible to obtain consistent and reliable data as to the silver production of Bolivia. No official statistics appear to be available. Probably most of the ore, silver precipitate, and bullion obtained is exported, but since export is from Chilean or sometimes from Peruvian ports, the segregation of figures relating solely to metal of Bolivian origin is not always possible. The following figures are quoted principally from "La Bolivie et ses Mines," Paris, 1914, and from the "Report of the Director of the United States Mint."

Production of Silver from Domestic Ores of Bolivia (in fine ounces).

	"La Bolivie et ses Mines."	U.S.A. Mint Reports.
1900	13,460,531	—
1901	8,969,636	—
1902	8,288,721	12,992,641
1903	5,190,747	6,083,333
1904	3,200,989	3,752,953
1905	2,852,976	3,096,998
1906	3,540,450	—
1907	4,794,474	—
1908	5,040,180	—
1909	5,035,260	—
1910	4,652,169	—
1911	4,112,241	—
1912	3,986,394	—
1913	—	—
1914	—	2,300,000
1915	—	2,475,884
1916	—	2,495,300
1917	—	2,435,200

In the latter part of last century the Bolivian silver output was quite important—10,000,000 ounces or more per annum—but of late years, while the output of Peru has been advancing, owing to the large-scale mining of silver-bearing copper ores, that of Bolivia has been declining. It does not now amount to as much as 3,000,000 ounces per annum. This falling off is attributed to poor mining and metallurgical practice, to the lowering of the grade of the silver ores in depth, to the low price of the metal, which has tended to cause the abandonment of silver mining in favour of tin mining, and to the fact that the exploitation of silver-bearing base metal ores has not yet been developed.

Chile:

The metalliferous province of Peru and Bolivia extends into Chile. But it is confined to the northern part of the country, the southern portion containing very few deposits. The tin-silver ores of Bolivia are not represented, but copper ores are abundant. In this respect the Chilian deposits resemble the Peruvian rather than the Bolivian. Indeed, Chile is an even greater producer of copper than Peru, the current annual output being exceeded only by that of the United States and Japan.

For the last few years the reported silver yield has been between 1,000,000 and 1,500,000 ounces per annum. It was formerly much greater. Between 1870 and 1900 the mean annual production was nearly 5,000,000 ounces, and in 1887 it attained a maximum of more than 7,000,000.

The production is almost entirely from silver ores, and it is to the gradual exhaustion of the richer parts of the mines at Arqueros, Agua Amaraga, Chañarcillo, Caracoles, Huantajaya, Santa Rosa, Garin, Argolla, &c., some of which are idle, that the continued diminution in output is due. The famous old mines of Huantajaya and Santa Rosa in Tarapaca, of Caracoles and Taltal in Antofogasta, and Chañarcillo in Atacama furnish all the silver obtained from ores of this kind. There is also a small quantity recovered from the silver-gold ores of Condoriaco in Coquimbo, and from silver-lead and copper ores.

With regard to the last, it is remarkable that, notwithstanding a current annual copper output of 75,000 tons, the Chilean production of silver should be so small. With the enormous operations now being carried on at Chuquicamata by the Chile Copper Co., and at Braden by the Braden Copper Co., involving a great increase in copper production, a concomitant increase in silver production might have been expected. Presumably these low-grade copper ores differ from the copper ores of Peru in their precious metal content, carrying silver in only very small amounts. It seems hardly likely, however, that this silver is not recovered from the copper when it is refined in the United States. It is significant that in the Chilean official returns, prior to 1908, the silver contained in copper ores was altogether ignored, from 1908 to 1915 a part only was regarded as of commercial value, but since 1916 the practice has been to include it all. This explains the apparent sudden increase in silver production in 1908 and in 1916 in the following output figures which are taken from the "Anuario Estadistico de la Republica de Chile":—

Production of Silver from Domestic Ores of Chile (in fine ounces).

1900	2,349,379	1909	1,154,482
1901	2,258,260	1910	1,123,970
1902	1,846,104	1911	889,807
1903	918,004	1912	970,283
1904	916,364	1913	940,510
1905	524,560	1914	882,412
1906	392,608	1915	811,452
1907	602,400	1916	1,525,291
1908	1,400,830		

In view of the certain expansion in the copper output from Chuquicamata and Braden, and of the probable establishment of a third great copper enterprise at Potrerillos, where extensive development is being carried on by the Andes Exploration Co., the silver production of Chile from copper ores alone may be expected to show a considerable increase in the near future, quite irrespective of any increase which may be due to the stimulus given to silver mining proper by the present demand for silver, and to the introduction of modern methods in the mining, ore-dressing, and extraction of silver.

Of the smaller South American producers Colombia is the most important. The silver output is derived entirely from gold ores and placer gold. Mining has so far been confined to to the precious metals, gold, silver, and platinum, but copper ores are reported to be very abundant and hold out promise of increased silver supplies at some future date. The following figures relating to Colombian silver are taken from the "Report of the Director of the United States Mint," and show that as recently as 1908 the output was well over 1,000,000 ounces:—

Production of Silver from Domestic Ores of Colombia (in fine ounces).

1900	1,864,165	1909	431,204
1901	1,881,649	1910	866,093
1902	1,776,604	1911	817,431
1903	1,128,799	1912	587,683
1904	946,066	1913	587,683
1905	679,245	1914	351,271
1906	763,335	1915	351,271
1907	1,048,719	1916	309,400
1908	1,375,039	1917	325,000

The silver obtained from Ecuador, Venezuela, Brazil, and Argentina is a by-product from gold mining.

The current production of South America may be stated in round numbers at about 15,000,000 ounces. The major part of it is derived from copper mines, but a considerable proportion still comes from silver mines. The mining of copper ores will grow as the result of the large scale developments now being directed from the United States, and that of silver is likely to show some revival as a consequence of the present silver shortage. It seems permissible, therefore, to look for a larger output of silver from South America at no distant date, although no substantial increase can be expected in the immediate future.

Europe.

Ores yielding silver are mined in nearly all the European countries, but only in Germany, Spain, and Austria-Hungary does the silver production now exceed 1,000,000 ounces annually.

Germany:

Germany has long been the largest producer in Europe. For the two decades preceding the war the silver won from German ores amounted each year to about 5,000,000 ounces.

The output is mainly derived from the base metal ores, of which the lead and lead-zinc ores of Rhenish Prussia (Cologne and Coblenz), the Harz (Clausthal and St. Andreasberg), the Saxon Erzgebirge (Freiberg, Annaberg, and Schneeberg), and Upper Silesia (Beuthen and Tarnowitz), and the copper ores of the Harz (Mansfeld and Rammelsberg) are the most important.

Silver mines occur in the Harz and the Erzgebirge, where the lead ores range from types rich in lead and poor in silver, to others carrying much silver and only a little lead. In the latter field, at Annaberg and elsewhere, silver-cobalt ores are also found, similar to those of Ontario. These silver mines were formerly of great importance, but the low price of silver which ruled for many years, before the war reduced them to a decadent condition. It is not unlikely that with an improved market for the metal they could be restored to some activity as silver producers.

Prior to 1914, Germany produced large quantities of silver from ores, &c., imported from other countries. Thus, according to data published by the Metallgesellschaft of Frankfort, whereas for the decade 1903–12 the production of silver from domestic ores averaged 5,410,217 ounces per annum, the total production of silver from all sources was 13,529,562 ounces, the balance of 8,129,355 ounces being derived from materials introduced from outside. Of these the most important were the lead and zinc concentrates from Broken Hill, New South Wales, which yielded annually as much or even more silver than the ores of German origin. During the war the exportation of Australian ores to Germany ceased and steps have been taken to ensure that it shall not be resumed. Silver production in Germany will be confined, for the present at any rate, to that derived from home resources, and in the event of the cession of Silesia to Poland these resources will be considerably diminished as a consequence of the loss of the important lead-zinc deposits of the Beuthen and Tarnowitz basins from which in the past Germany has derived three-fourths of her zinc and one half of her lead, as well as a considerable proportion of her silver.

The silver obtained from ores raised in Germany during the years 1900–17 is given below, the figures after 1913 being estimates only. The United States Mint Reports record no silver

production for the years 1914-17, but since the silver supplies of German origin come from ores of lead and copper and these metals were urgently needed by Germany during the War, an estimate at about the pre-war rate of production seems likely to be nearer the truth than an estimate of *nil*.

Production of Silver from Domestic Ores of Germany (in fine ounces).

	U.S.A. Mint Report.	Metallgesellschaft.
1900	5,411,441	—
1901	5,521,648	5,523,714
1902	5,722,641	5,723,056
1903	5,822,452	5,822,727
1904	5,799,133	5,800,241
1905	5,820,947	5,822,727
1906	5,696,433	5,697,335
1907	5,088,086	5,089,662
1908	4,971,554	4,970,699
1909	5,332,901	5,335,017
1910	5,597,026	5,597,663
1911	4,984,677	4,983,560
1912	4,984,677	4,983,560
1913	4,984,677	—
1914	4,000,000	—
1915	4,000,000	—
1916	4,000,000	—
1917	4,000,000	—

It may here be mentioned that before the War considerable quantities of the Broken Hill concentrates purchased by German agents were distributed to smelteries in Belgium, where the contained lead, zinc, and silver were extracted. Additional raw materials carrying silver, &c., were also imported from other countries, *e.g.*, the Belgian Congo, Mexico, and South America. It thus happened that before 1914 Belgium, though producing practically no silver from domestic sources, produced important quantities from ores, &c., raised elsewhere. According to the statistical tables issued by the Metallgesellschaft, whereas the mine production for the years 1903–12 was *nil*, the smelter production averaged 7,461,050 ounces a year, an amount greater than the mine production of any European country. Attempts are being made to restart these industries, but with the cost of labour and transport, and of fuel and other materials, so high, and much of the metallurgical plant damaged or even destroyed, a long time must elapse before Belgium is again able to play any important part in the production of silver.

Spain:

At the end of the 19th century Spain was the world's greatest producer of lead; even now the lead production is only surpassed by that of the United States and Australia. It is from lead ores that Spain's important output of silver, which amounts in round figures to about 4,500,000 ounces per annum, ranking next to that of Germany, is mainly obtained.

The lead and silver-lead ores are widely distributed, but the principal mines are in the south-eastern provinces, especially in Murcia, Jaen (Linares), Ciudad Real, Cordoba, and Almeria.

The only other productive ores are copper ores, notably the pyritic ores which occur in Huelva and extend westwards into Portugal (Rio Tinto, Tharsis, San Domingo, &c.). A large tonnage of these is exported annually to other European countries for the manufacture of sulphuric acid, and silver is recovered from the residues. Silver amounting to some 300,000 ounces is annually extracted from such residues in Great Britain.

The output of silver from Spanish ores is indicated for a number of years in the following table:—

Production of Silver from Domestic Ores of Spain (in fine ounces).

1900	3,185,316	1909	4,767,091
1901	3,185,316	1910	4,152,430
1902	3,700,189	1911	4,152,430
1903	4,878,076	1912	5,152,626
1904	4,876,076	1913	4,231,815
1905	4,000,000	1914	4,228,593
1906	4,064,532	1915	4,565,396
1907	4,097,035	1916	4,517,800
1908	4,175,674	1917	4,500,000

The silver content of the lead ores is recovered in Spain, that of the copper ores, which is comparatively small, is extracted mainly in the importing countries. This is shown by the following figures taken from the statistical tables of the Metallgesellschaft. For the ten years 1903–12 the recoverable silver contained in Spanish ores raised annually amounted on the average to 4,425,080 ounces. Of this 3,936,369 ounces, or nearly 90 per cent., was

recovered in Spain, leaving 488,710 ounces, or only slightly more than 10 per cent. in exported materials—principally the cupreous pyrites above referred to.

Austria-Hungary:

The production of silver of Austria-Hungary is obtained from three principal regions—Bohemia (Przbram), Northern Hungary (Schemnitz and Kremnitz), and Eastern Hungary (Transylvania, &c.) The first yields silver-lead ores, the second silver-gold and silver-lead ores, and the third gold ores carrying silver. The mines in these areas although old may be expected to continue steady producers of silver for a long time to come. The Austrian mines are quantitatively much more important than the Hungarian, as is shown by the following figures for 1910:—

	Fine ounces.
Austria (Przbram, Bohemia)	1,139,404
Hungary	401,404
	1,540,808

The annual production, which has for many years ranged between 1,000,000 and 2,000,000 ounces, is given from 1900 in the subjoined table:—

Production of Silver from Domestic Ores of Austria-Hungary (in fine ounces).

1900	1,988,774	1909	999,184
1901	1,996,706	1910	1,540,808
1902	1,881,132	1911	1,538,772
1903	1,642,048	1912	1,840,247
1904	1,987,797	1913	2,104,107
1905	1,860,169	1914	1,572,746
1906	1,806,322	1915	1,772,699
1907	1,744,233	1916	1,500,000
1908	1,770,457	1917	1,500,000

Of the smaller European producers Turkey is perhaps the most important. The Turkish output had reached about 1,500,000 ounces before the war. The deposits are in Asia Minor. There are State-owned silver mines at Bulghar Maden, near Konia in the Taurus, and argentiferous lead-zinc mines at Balia Karaidin in Broussa. Some silver is also obtained from the copper mines of the Caucasus. The silver from the silver ores is extracted in Turkey, but that in the lead and copper ores is recovered outside the country.

The Ottoman Empire, which has never been systematically surveyed, has frequently been reported to be very rich in minerals. During the war, however, it was prospected in the German interests by Prof. Beyschlag, who came to the conclusion that the mineral resources were of little more than parochial interest, and that the possibility of finding deposits of international importance was practically excluded. No substantial increase in Turkish silver production can therefore be looked for.

Greece has a yearly output of about 750,000 ounces, mainly derived from the ancient lead-zinc mines of Laurion; and Italy from the silver-lead and lead-zinc mines of Sardinia produces annually about 500,000 ounces. The production of these two countries since 1900 is given below.

Production of Silver from Domestic Ores of Greece and Italy (in fine ounces).

	Greece.	Italy.
1900	1,011,656	751,335
1901	1,154,046	964,333
1902	1,090,188	964,339
1903	718,148	806,335
1904	727,069	757,777
1905	829,025	757,777
1906	829,025	672,449
1907	829,025	737,843
1908	829,025	674,848
1909	829,025	786,620
1910	881,539	468,566
1911	803,750	998,576
1912	803,750	447,761
1913	803,750	423,888
1914	591,464	510,365
1915	591,464	493,856
1916	350,000	486,500
1917	350,000	450,000

The output of silver from ores raised in the United Kingdom is very small, and has been decreasing for many years. During the latter part of last century it was over 300,000 ounces a year; at the beginning of this century it had fallen to 200,000, and in 1917 to 75,000. It is

practically all obtained from lead ores, a very small amount only coming intermittently from copper, zinc, and gold ores. The silver from these ores is recovered in Great Britain; and a large additional quantity is obtained from ores, &c., imported from other countries. This matter will be more fully referred to in another section of the Report.

France produces from lead ores about 500,000 ounces of silver a year.

The output from domestic ores in Great Britain and France during the present century is set out in the following table, the figures for the former being taken from the "Mines and Quarries, General Report, Home Office," and for the latter from the "Annual Report of the Director of the United States Mint":—

Production of Silver from Domestic Ores of Great Britain and France (in fine ounces).

	United Kingdom.	France.
1900	190,850	452,151
1901	174,466	384,263
1902	146,606	384,339
1903	174,891	747,359
1904	159,689	298,103
1905	167,569	890,555
1906	148,341	719,453
1907	153,684	794,973
1908	135,268	592,042
1909	142,146	629,848
1910	136,665	713,028
1911	118,458	429,831
1912	122,998	429,831
1913	138,046	520,766
1914	146,444	300,000
1915	96,448	300,000
1916	86,485	300,000
1917	75,472	300,000

The Russian production, though estimated for the years 1915–17 at only about 500,000 ounces per annum, deserves special mention because there are prospects of future expansion. The silver is procured as a by-product from ores of gold, copper, and lead, which are mined in both European and Asiatic Russia.

Approximately 75 per cent. of the total yield is obtained in the refining of gold bullion and blister copper, and 25 per cent. from that of argentiferous lead. The gold bullion, derived in part from lode mines but mainly from the alluvial workings of Siberia, is parted in the Government refineries. The principle silver-yielding copper mines are those of the Urals (Bogoslovsk, Kyshtim, Tanalyk)—where, since the prohibition of bullion export in 1915, the silver has been recovered as fine metal—and of the Kirghiz Steppes (Atbasar, Spassky, Yusspensky)—the crude copper in this case being sent by the Spassky Copper Mines Co., to its refinery at Moscow for the recovery of pure copper, silver, and gold. The copper ores of the Caucasus (Kedabeg, &c.), are of smaller importance as silver producers. In the Altai region extensive deposits of argentiferous mixed ores, which by shallow mining formerly yielded large quantities of lead and silver and some copper, are being ambitiously developed by the Russian Mining Corporation (Zmeinogorsk, and Zyrianovsk) and the Irtysh Corporation (Riddersk). The ores are to be smelted at Ekibastus where coal is available and where smelteries are already established and refineries contemplated. Important silver-lead deposits, similar to those of the Altai, also occur near Nerchinsk in the Trans-Baikal. The mines seem to be idle at present, but at one time produced considerable quantities of lead, silver, and gold. The ores from these and other deposits of the Eastern Asiatic mainland are now being sought by the Japanese whose domestic supplies of lead and zinc are deficient, but whose metallurgical installations compare favourably with any in the world.

From what has been said it will be gathered that the yield of silver from Russian mines, though at present small, may at no distant date become of considerable importance.

Production of Silver from Domestic Ores of Russia (in fine ounces).

1900	151,142	1909	132,122
1901	164,836	1910	140,632
1902	167,358	1911	477,140
1903	161,453	1912	200,094
1904	172,912	1913	300,000
1905	204,960	1914	300,000
1906	166,183	1915	638,403
1907	132,122	1916	550,000
1908	132,122	1917	500,000

The famous old Government mines of Kongsberg in Norway (Kongens, Samuels, Gotteshilfe, &c.,) still produce between 300,000 and 400,000 ounces of silver a year. A

smaller amount is obtained from the lead-zinc mines of Sweden. With the exception of a very small and intermittent supply from the copper mines of Servia there are no other silver producers in Europe :—

Production of Silver from Domestic Ores of Norway and Sweden (in fine ounces).

	Norway.	Sweden.
1900	172,839	61,983
1901	165,902	53,986
1902	206,413	46,226
1903	197,928	34,117
1904	260,210	23,702
1905	242,805	24,765
1906	175,475	32,375
1907	201,516	29,761
1908	226,175	35,728
1909	213,122	29,373
1910	229,989	19,823
1911	292,075	19,823
1912	247,988	32,202
1913	247,988	58,969
1914	440,917	33,511
1915	413,867	24,230
1916	439,100	37,900
1917	282,000	35,000

The production of silver from European mines may be stated to be, in normal times, about 15,000,000 ounces per annum. It is at present very largely dependent upon the production of base metals, and a continued production on this scale may be anticipated. If the present high price of silver should be established, production might possibly show a small increase as the result of the more vigorous working of existing silver mines or the re-opening of such of them as have been closed down because of the exhaustion of ore which was profitable when silver was cheap. But in a region so long mined no substantial expansion in the silver yield is likely to occur.

Asia.

Asia is the great importer of silver, India and China ranking among the world's largest consumers. The only countries producing more than 1,000,000 ounces yearly are Japan and India, but smaller supplies come from the Dutch East Indies, Asia Minor, Siberia and China.

Japan :

The Japanese production, which was under 2,000,000 ounces in 1900, has increased steadily during the past 20 years. For each of the last four years it was well over 5,000,000 ounces.

This increased silver output, like that of Peru, has been mainly due to an augmented production of copper. Japan, with an annual output of over 80,000 tons, now takes second place among copper producers. The copper ores practically all carry silver and gold. In some of them silver values predominate, giving silver-copper ores yielding silver mainly and copper as a by-product, but in most of them copper is the principal metal, the values in silver and gold being small. Japanese mining and metallurgy are excellent, ores formally regarded as useless now being skilfully and successfully exploited.

There are three principal mining areas, Kosaka-Hitachi in the north, Ashio in central Japan, and Besshi in the south, on the island of Shikoku. Both mining and smelting are in the hands of a few large and well organised companies. The northern area is worked by the Fujita, Kuhara, and Mitsubishi Companies, the Ashio area by the Furukawa Co., and the Besshi by the Sumitomo Co. In all cases pure copper and fine gold and silver are produced.

Base metal ores other than those of copper are not abundant in Japan, but some lead, zinc, and mixed ores occur, and yield a little silver.

Ores of silver and gold are also of subordinate importance, although there are a few precious metal mines which make notable contributions to the silver supplies. Some of these lie within the copper mining areas, but others occur apart from them. The three most important, as regards silver, are the Tsubaki silver mine to the west of Kosaka, the Ikuno silver mine in Central Japan, and the gold mines of Sado on the island of that name, off the west coast of the mainland. These are all controlled and operated by one or other of the large mining companies whose sphere of influence extends also to the mines of Formosa and Korea.

The production of Japan since the beginning of the century is indicated by the following figures, which are taken from the Report of the Director of the United States Mint:—

Production of Silver from Domestic Ores of Japan (in fine ounces).

1900	1,729,603	1910	4,581,613
1901	1,729,603	1911	4,459,089
1902	1,853,222	1912	4,932,852
1903	1,887,407	1913	4,649,910
1904	1,984,674	1914	4,836,228
1905	2,664,842	1915	5,120,293
1906	2,530,093	1916	5,805,700
1907	3,073,411	1917	6,844,500
1908	3,887,397	1918	5,967,026
1909	4,130,972		

The mineral resources of Japan are deficient in lead and zinc, both of which metals are largely used in the country. Of late years considerable quantities of lead and zinc ores have been imported from Siberia and China, and during the War even from Australia, and some of these have yielded silver. The total production of silver in Japan is therefore in excess of the domestic production, and in view of the extensive facilities for smelting and refining which exist in the country, the recovery of silver from the ores of suitably placed foreign mines may be expected to grow.

Under Japanese rule Formosa and Korea have become useful small contributors of silver. The metal is obtained as a by-product from gold mines, and the output of the last few years has averaged 50,000 ounces from the former field and 25,000 from the latter.

India:

The Indian silver supplies come from the ancient mines of Bawdwin in the Northern Shan States of Upper Burma, which, since the fifteenth century and until 1868, were worked intermittently for silver by the Chinese.

The operation of the mines on modern lines was undertaken about 1904, the extensive slag dumps first receiving attention, and yielding large quantities of lead bullion containing from 10 to 30 ounces of silver to the ton. Later, the Burma Mines, Ltd., now controlled by the Burma Corporation, investigated the ore bodies, which proved to be of such dimensions as to warrant developments on a very large scale, and these are now being carried out.

The ore is an intimate mixture of sulphides of lead and zinc, some of the bodies also carrying copper. All contain important values in silver. The best ore assays as much as 50 per cent. of lead, 25 per cent. of zinc, and 50 ounces of silver to the ton. The following table, taken from the "Engineering and Mining" Journal for Feb. 8, 1919, gives a number of typical are analyses:—

Analyses of Silver-Lead-Zinc Ore, Burma Mines, Ltd.

	Silver. oz. per ton.	Lead. per cent.	Zinc. per cent.
Silver-lead ore	47·6	50·0	19·2
" " "	54·4	50·4	24·1
High-zinc ore	11·0	11·2	38·8
" " "	15·5	13·6	40 7
Zinc-lead ore	38·5	33·9	36·3
Second-grade ore	11·8	22·5	7·0

The output of silver is given in the Reports of the Burma Mines, Ltd., as 285,112 ounces for 1915, 977,121 for 1916, 1,793,659 for 1917, and 1,970,000 for 1918. The more conservative figures quoted by the Geological Survey of India are as follows:—

Production of Silver from Domestic Ores of India (in fine ounces).

1909	27,500	1914	236,446
1910	49,680	1915	284,875
1911	103,850	1916	759,012
1912	93,476	1917	1,580,577
1913	125,209		

Originally the raw material was smelted at Mandalay, but in 1911 metallurgical operations were transferred to Namtu, a few miles from the mines, and here both smelteries and refineries have been established permitting of the production of fine silver. Up to the present the principal products have been lead and silver, but the recovery, in Central India, of the zinc and copper and of the silver associated with them is engaging attention. Arrangements are also being made for the provision of hydro-electric power. The district, which is extensively mineralized, is being prospected by mining geologists, and important additional discoveries are not improbable. The centre has every prospect of becoming, in the near future, one of the most important producers in the British Empire, not only of silver, but also of the associated base metals.

The gold ores of the Kolar field, Mysore, yield a small amount of silver. From information kindly supplied by Messrs. John Taylor & Sons it appears that during a representative year the bullion produced yielded 440,528 ounces of gold and 36,832 of silver.

The silver from the Dutch East Indies is obtained from the gold-silver mines of the Benkoelen district on the west cost of Sumatra. The most important of these, the Redjang Lebong mine, has had a steady output approximating to 500,000 ounces for many years. Further discoveries in this district have recently been reported.

Information as to the Chinese production is scanty, possibly the output, which is all absorbed in the country, may be larger than is reported. The silver is derived mainly from lead or lead-zinc ores. The best known mine is the Shuikoushan in Hunnan, which is operated by the Government and is stated to have yielded 50,000 ounces in 1915. There are also silver-lead mines near Jehol, Mongolia, which towards the end of last century were producing about 100,000 ounces annually.

Reference has already been made under Europe to the silver resources of Asiatic Turkey and Russia, and to the fact that those of Serbia are likely to increase in importance.

From what has been said it will be gathered that Asia is not a large producer of silver; but the production is a growing one. At the beginning of this century it was less than 2,000,000 ounces: in 1917, owing to mining activities in Japan and Burma, it had increased to 9,000,000. There is reason to believe that this expansion in output will continue.

AFRICA.

The silver output of Africa is smaller than that of any other continent. It has never reached 2,000,000 ounces in any one year.

The only important producers at present are the gold mines of the Transvaal and Rhodesia, the combined annual totals from which have for many years exceeded 1,000,000 ounces. Small quantities are also obtained from the gold mines of the Gold Coast and other parts of Africa.

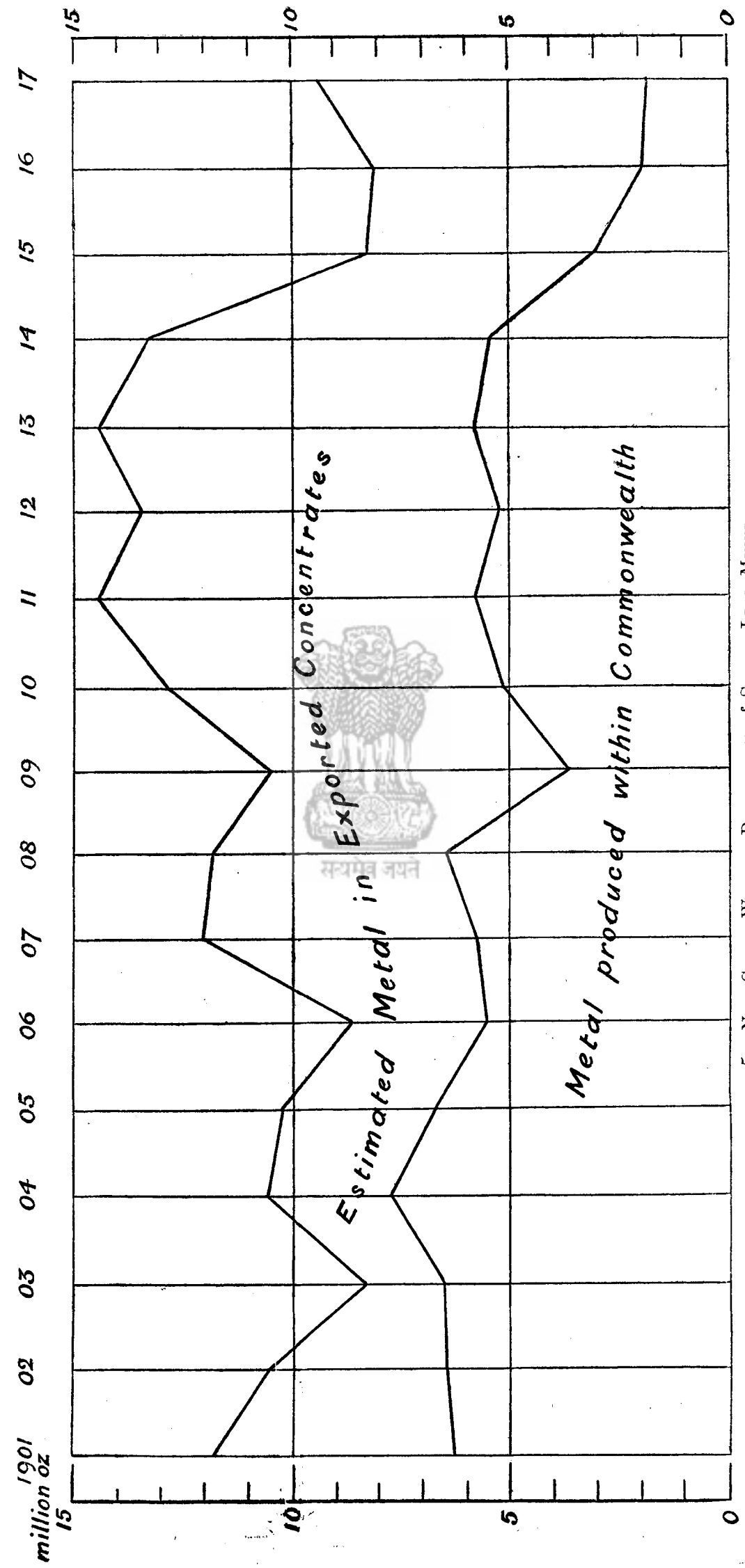
The production from the Transvaal and Rhodesia is given in the following table, the figures being obtained for the former from the "Annual Report of the Transvaal Mines Department" and for the latter from Colonial Office Reports:—

Production of Silver from Domestic Ores of the Transvaal and Rhodesia (in fine ounces).

	Transvaal.	Rhodesia.
1900	(not recorded)	951
1901	"	3,132
1902	122,573	3,445
1903	350,070	20,715
1904	416,262	70,146
1905	540,145	89,278
1906	641,550	110,575
1907	715,030	147,324
1908	809,611	283,424
1909	814,557	262,133
1910	827,090	217,633
1911	896,539	187,641
1912	1,018,842	176.532
1913	952,521	142,390
1914	890,562	150,793
1915	965,914	186,233
1916	968,895	200,676
1917	938,111	212,000

Base metal ores have so far played but an insignificant part in African silver production. The Transvaal figures above quoted include, for certain years, small amounts derived from copper or lead ores. Argentiferous lead-copper ores are also worked in South-West Africa at Otavi. Before the war the products were sent to Germany for refining and are reported to have yielded 225,064 ounces of silver in 1907, 402,672 ounces in 1908, 397,431 in 1909, 400,421 in 1910, 271,909 in 1911 and 374,989 in 1912. Silver-bearing lead ores are also mined in Algeria and Tunis, the former having supplied 146,613 ounces of silver in 1912.

Among prospective producers may be mentioned the lead-zinc mines of Broken Hill, Rhodesia, and the copper mines of Katanga, in the Belgian Congo. The former have at last reached the productive stage and seem likely to yield important supplies of lead and possibly of zinc also. Silver values are low—5 ounces or less to the ton—but they may improve in the sulphide ore which underlies the oxidized ore now being exploited. The Katanga mines already rank among the great producers of copper. Before the war the partially smelted products were sent to Belgium for refinery and had already begun to furnish small amounts of silver. When the contemplated output has been attained and sulphide ores are reached, it is possible that the silver production may become considerable.



5.—New South Wales. Production of Silver Lead Mines.

The existence of large bodies of lead-zinc-silver ores in Nigeria has lately been reported on good authority. Samples of the ore in bulk are being sent to this country for examination.

AUSTRALASIA.

The chief centres of silver mine production in Australia are the Broken Hill field of New South Wales, the Mount Lyell and Zeehan fields of Tasmania, and the Hauraki field of New Zealand. The supplies from the first are obtained from mixed (silver-lead-zinc) ores, from the second from copper ores, from the third from silver-lead ores, and from the fourth from dry or siliceous ores. Minor amounts also come from the gold and lead-zinc ores, of the Kalgoorlie and Northampton fields respectively of Western Australia, and from the gold and copper ores of Queensland.

New South Wales:

Before the war, New South Wales was surpassed as a silver producer only by Mexico, the United States, and Canada. In 1912 the output was nearly 6 per cent. of that of the world; but since 1914 it has fallen by some 40 per cent., and is for the moment less than that of Peru. Right up to the beginning of the war the output was fully maintained; in 1913 it was as great as for any previous year. The sudden decrease in output was the result of war dislocation, and not to exhaustion of the deposits. The dislocation was especially marked in the case of New South Wales because Germany had been for many years the principal importer of the large balance of ore-concentrates that was not treated metallurgically in Australia.

The silver is obtained exclusively from base metal ores—silver-lead-zinc at Broken Hill, silver-lead at Yerranderie, and copper at Great Cobar. The yield from the last is small and intermittent, that from Yerranderie reached a maximum of about 750,000 ounces in 1909; it is now about 250,000. Over 95 per cent. of the production comes from Broken Hill.

The Broken Hill deposit, discovered in 1883, is still one of the world's important silver reservoirs. Originally, in dressing the sulphide ore, only a lead concentrate, rich in silver, was obtainable. The zinc mineral with its silver, being unrecoverable, went to the dumps. In this way millions of tons of metalliferous tailings accumulated which could not be utilised. The advent of flotation, however, about the beginning of this century, permitted the recovery of the zinc blende as well as the galena, and for many years zinc concentrates and lead concentrates have been obtained both from the ore and from the tailings. The lead concentrates run about 54 per cent. lead, 12 per cent. zinc, and 55 ounces of silver to the ton, and the zinc concentrates about 48 per cent. zinc, 6 per cent lead, and 9 ounces of silver to the ton.

All of the lead concentrates are now smelted in Australia, but only a small proportion of the zinc concentrates. Prior to the war, these latter were exported in large quantities—over 500,000 tons a year in 1911–13— to Germany and Belgium, and to a small extent to Great Britain, and in these countries their zinc, lead, and silver were extracted. During the war the smelting of these concentrates was seriously checked owing to the fact that their principal outlet was closed. This entailed a reduced production of silver from ores of Australian origin. Towards the close of the war a greater utilisation of the concentrates was effected in Australia, and a considerable export to America and Japan was arranged as a temporary measure. The whole question of the smelting of Broken Hill ores, now that the Imperial Government has undertaken the purchase of the output for a period of years, is being fully considered with the intention of dealing with them entirely in Australia and Great Britain. A much greater tonnage of the zinc concentrates could be produced if smelting facilities were available.

The total quantity of silver yielded by the mines of new South Wales, including that recovered in Australia and that contained in exported concentrates during the period 1901–17 is given below :—

Production of Silver from Domestic Ores of New South Wales (in fine ounces).

—	Produced in Australia.	Contained in Concentrates, &c., Exported.	Total.
1901	6,293,619	5,527,978	11,821,597
1902	6,416,650	3,909,110	10,325,760
1903	6,489,689	1,736,512	8,226,201
1904	7,751,667	2,945,058	10,696,725
1905	6,804,934	3,480,561	10,285,495
1906	5,575,410	3,111,013	8,686,423
1907	5,921,457	6,228,225	12,149,682
1908	6,484,288	5,499,381	11,983,669
1909	3,717,016	6,867,775	10,584,791
1910	5,196,323	7,608,336	12,804,659
1911	5,731,468	8,797,677	14,529,145
1912	5,220,538	8,293,711	13,514,249
1913	5,908,638	8,596,251	14,504,889
1914	5,481,286	7,879,240	13,360,526
1915	3,081,952	5,222,927	8,304,879
1916	1,962,091	6,107,280	8,069,371
1917	1,782,004	7,581,129	9,363,133

Diagram 5 tabulates these figures graphically and shows at a glance the proportion of the total silver, contained in New South Wales ores, which was recovered in Australia and the proportion available for recovery abroad.

Tasmania:

The annual output of silver from the copper ores of the Mount Lyell field and the silver-lead ores of the Zeehan field during the first 13 years of the century ranged between 1,000,000 and 2,000,000 ounces; but since 1913 it has fallen to about 500,000 ounces. This is due to a reduced output from the latter field, which formerly was the more important producer of the two. An increased output of lead, silver, and zinc is expected, however, from the adjacent Read-Roseberry field, but as the mines are only in process of development at least one or two years must elapse before any improvement is realised.

New Zealand:

Of the metals mined in New Zealand, gold is by far the most important, and the silver output is derived almost exclusively from gold ores, of which those of the Hauraki field are the most productive. The annual production may be broadly stated at about 1,000,000 ounces; it has been declining somewhat of late years.

The silver yields of Tasmania, New Zealand, and Queensland, since the beginning of the century, are indicated by the following data mostly taken from the Reports of the relative Mines Departments. In some cases the figures for recent years are estimates only:—

Production of Silver from Domestic Ores of Tasmania, Queensland, and New Zealand (in fine ounces).

	Tasmania.	Queensland.	New Zealand.
1900	—	—	326,457
1901	—	—	571,134
1902	1,674,816	701,312	674,196
1903	1,855,158	642,125	911,914
1904	1,896,134	654,929	1,094,461
1905	2,075,431	601,712	1,179,744
1906	2,150,405	783,087	1,390,536
1907	2,147,120	921,497	1,562,603
1908	1,654,350	1,162,276	1,731,336
1909	1,534,780	1,001,383	1,813,830
1910	1,584,022	861,202	1,711,253
1911	1,841,248	549,015	1,311,043
1912	2,282,993	569,181	801,165
1913	2,578,253	533,119	975,616
1914	500,000	253,964	599,162
1915	500,000	239,748	957,541
1916	500,000	243,000	787,053
1917	500,000	240,000	780,000
1918	—	—	—

Summarised Figures.

The foregoing details as to the world's production of silver are summarised in the appended tabular statement, which specifies separately the contributions of those countries which in any year between 1902 and 1917 yielded 500,000 ounces or more, the figures for the smaller producers being lumped together under the appropriate continents. Continental and world totals are added.

The data in this Table are epitomised in graphic form in diagram 6 which shows the variations in production, over the same period, both of the several countries or continents and of the world as a whole. In diagram 7 the matter has been set out so as to permit of a comparison between the output from mines within the British Empire and that from the mines of the rest of the world.

These diagrams show very clearly that the reduced output of the last five years has been almost entirely due to the great Mexican slump following the outbreak of civil war in 1913, the production curves for other countries or continents being maintained right through to 1917 without any marked depression.

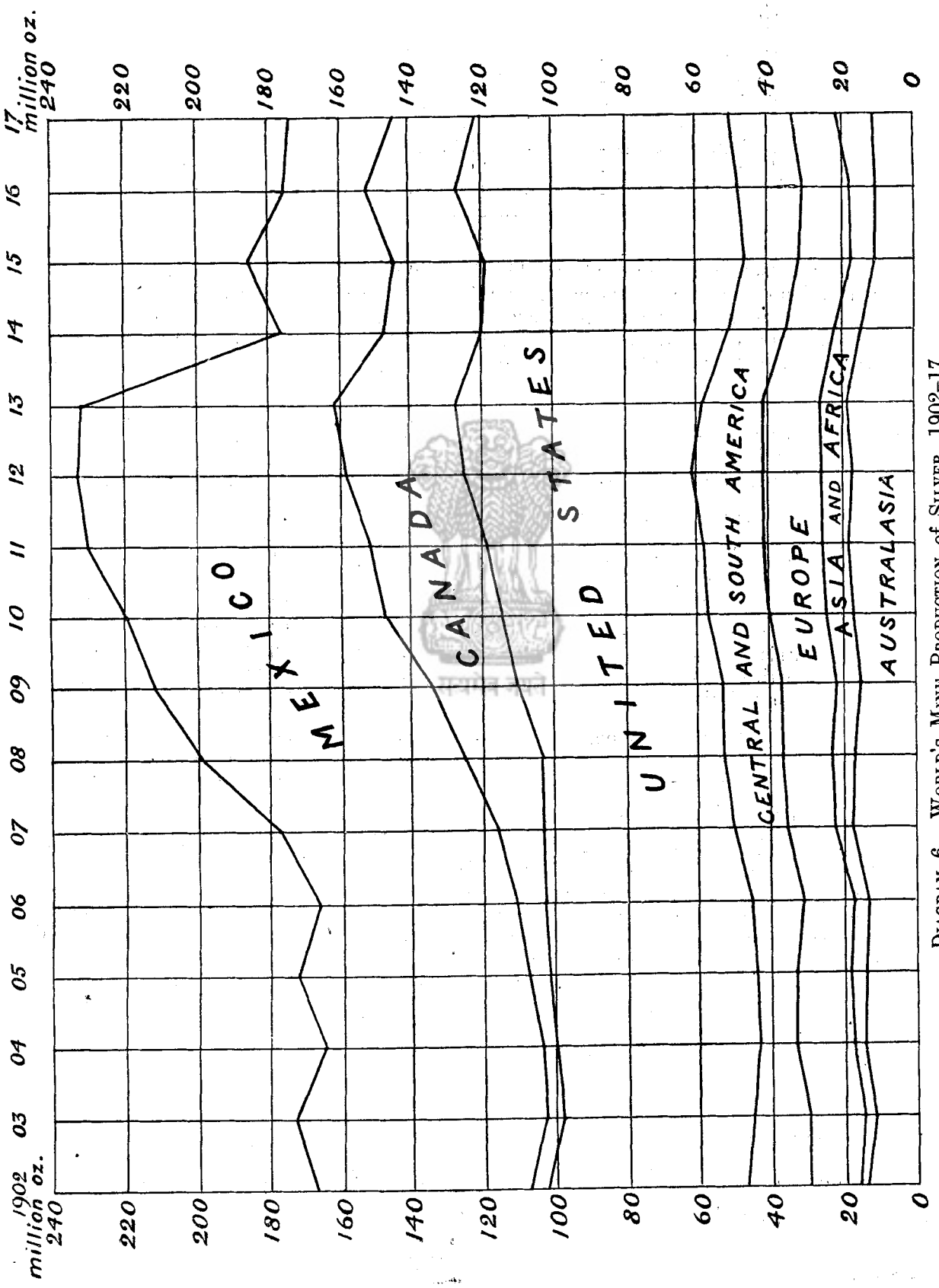


DIAGRAM 6.—WORLD'S MINE PRODUCTION of SILVER, 1902–17.

The actual and relative importance of the larger producers is shown below for 1912, this year having been chosen as being the last year of normal production unaffected either by the Mexican Revolution or by the European War:—

Country.	1912. Quantity in ounces.	Per cent. of World's Total.
Mexico	74,640,300	32·0
United States	66,041,506	28·3
Canada	31,955,560	13·7
New South Wales	13,514,249	5·8
Peru	10,428,566	4·5
Spain	5,152,626	2·2
Germany	4,984,677	2·1
Bolivia and Chile	4,956,677	2·1
Japan	4,932,852	2·1
Others	16,453,740	7·2
Total	233,060,753	100·0

These facts are expressed graphically in diagram 8, which shows the geographical distribution of the major producers, and indicates their quantitative importance by circles whose areas are approximately proportional to output.

The figures for 1912 are also assembled in the following table to show the actual output and relative importance of the three most productive countries and of the continents:—

	1912. Ounces.	Per cent.
Canada	31,955,560	13·7
Mexico	74,640,300	32·0
United States	66,041,506	28·3
TOTAL NORTH AMERICA	172,637,366	74·0
Central and South America	19,810,666	8·5
TOTAL NEW WORLD	192,448.032	82·5
Europe	15,992,082	6·9
Asia	5,504,532	2·4
Africa	1,763,024	0·8
Australasia	17,353,083	7·4
TOTAL OLD WORLD	40,612,721	17·5
TOTAL WORLD	233,060,753	—
British Empire	50,642,737	21·7

It will be seen that the joint production of Mexico and the United States was over 60 per cent. of the total for the world, that of North America as a whole was 74 per cent., and of the two Americas no less than 82·5 per cent. The rest of the world provided only 17·5 per cent., and the contribution of the British Empire was about 22 per cent.

For the purpose of comparison with these figures, five-years averages for 1902–06 and 1907–11, and a four-years average for 1914–17 are tabulated also:—

	5-Years' Average, 1902–1906. Ounces.	Per cent.	5-Years' Average, 1907–1911. Ounces.	Per cent.
Canada	5,108,000	3·0	25,569,000	12·3
Mexico	62,350,000	37·0	71,832,000	34·6
United States	55,887,000	33·2	55,880,000	27·0
TOTAL NORTH AMERICA	123,345,000	73·2	153,281,000	73·9
Central and South America	13,715,000	8·1	16,269,000	7·8
TOTAL NEW WORLD	137,060,000	81·3	169,550,000	81·7
Europe	15,044,000	8·9	14,937,000	7·2
Asia	2,366,000	1·4	4,559,000	2·2
Africa	481,000	0·3	1,456,000	0·7
Australasia	13,590,000	8·1	16,888,000	8·2
TOTAL OLD WORLD	31,481,000	18·7	37,840,000	18·3
TOTAL WORLD	168,541,000	—	207,390,000	—
British Empire	19,171,000	11·4	43,536,000	22·0

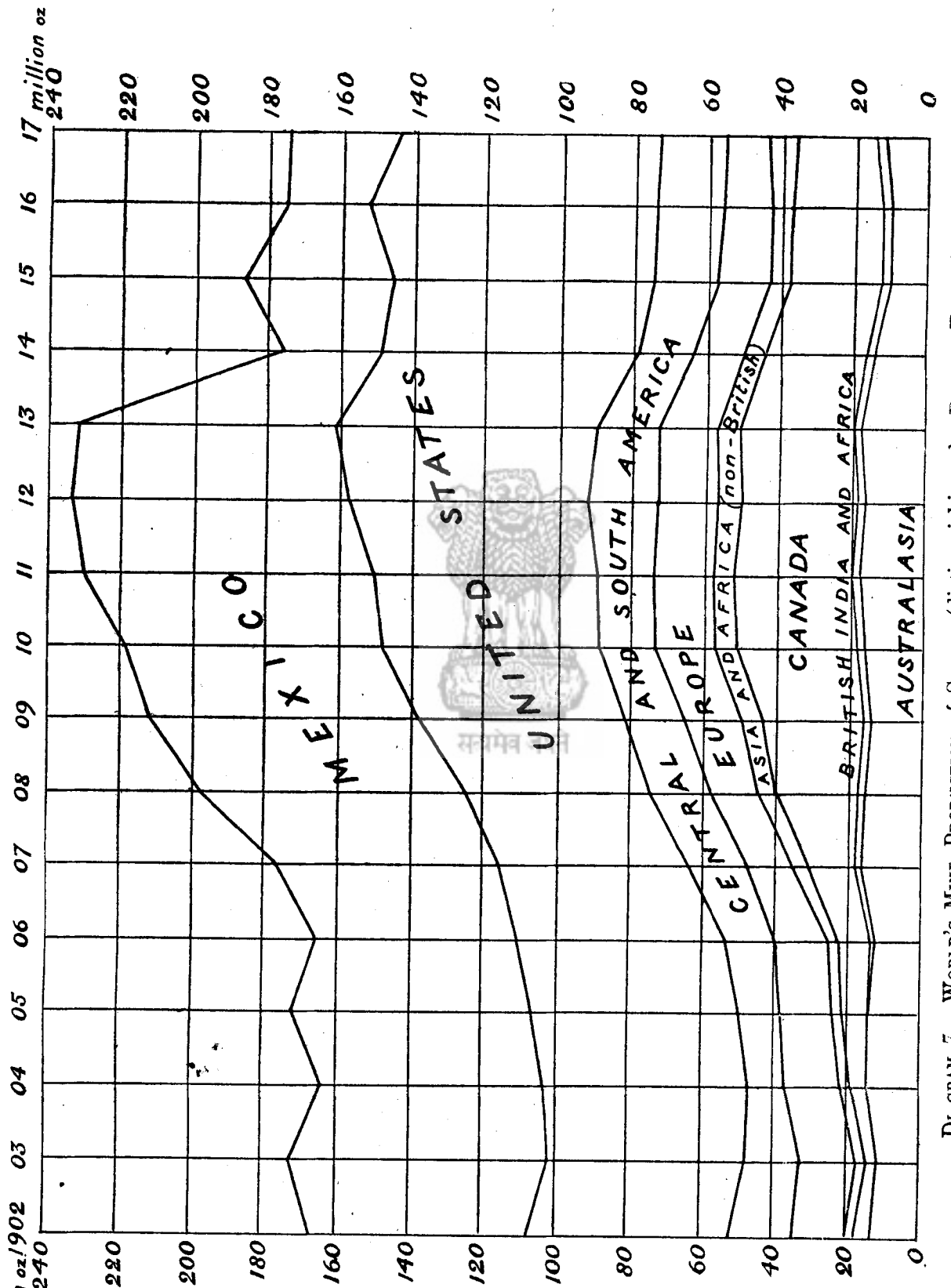


DIAGRAM 7.—WORLD'S MINE PRODUCTION of SILVER (distinguishing the BRITISH EMPIRE).

	4-Year's Average, 1914–1917.	
	Ounces.	Per cent.
Canada	25,689,000	14·4
Mexico	30,292,000	17·0
United States	72,886,000	40·9
TOTAL NORTH AMERICA	128,867,000	72·3
Central and South America	16,775,000	9·4
TOTAL NEW WORLD	145,642,000	81·7
Europe	13,362,000	7·5
Asia	6,468,000	3·7
Africa	1,161,000	0·7
Australasia	11,441,000	6·4
TOTAL OLD WORLD	32,432,000	18·3
TOTAL WORLD	178,074,000	—
British Empire	38,987,000	21·9

Although the actual figures of output for these periods differ considerably among themselves and from those for 1912, the larger percentage proportions are remarkably constant. Broadly speaking 80 per cent. of the silver has for many years come from the New World and 20 per cent. from the Old World. These proportions have been practically constant over so long a period that they are not likely to change in the near future.

The increase in the figures for the British Empire during the first two periods reflects the discovery and growth of the Cobalt field. With regard to the last period the fall in the figures for Mexico indicates the effects of the Mexican Revolution, while the fall in those for Australia and Europe and the rise in those for the United States are referable to unfavourable and favourable effects respectively of the European War. The fall in the Canadian figures, as compared with 1912, is evidence of the natural decline of the Cobalt field, while the rise in those for Asia is due to the normal growth of Japanese production and the more recent increase in that of Burma.

The output prior and subsequent to the disturbing effects of war in Mexico and Europe may be compared in broad generalised figures as follows. The annual production in Europe during the war is uncertain; it is here put at about 10 million ounces:—

	Normal Pre-War Production.	Abnormal War Production.	Difference.
	(Million ounces.)	(Million ounces.)	(Million ounces.)
Canada	30	25	− 5
Mexico	75	30	− 45
United States	65	70	+ 5
Central and South America	20	20	—
Europe	15	10	− 5
Asia	5	10	+ 5
Australasia	15	10	− 5
TOTAL	225	175	− 50

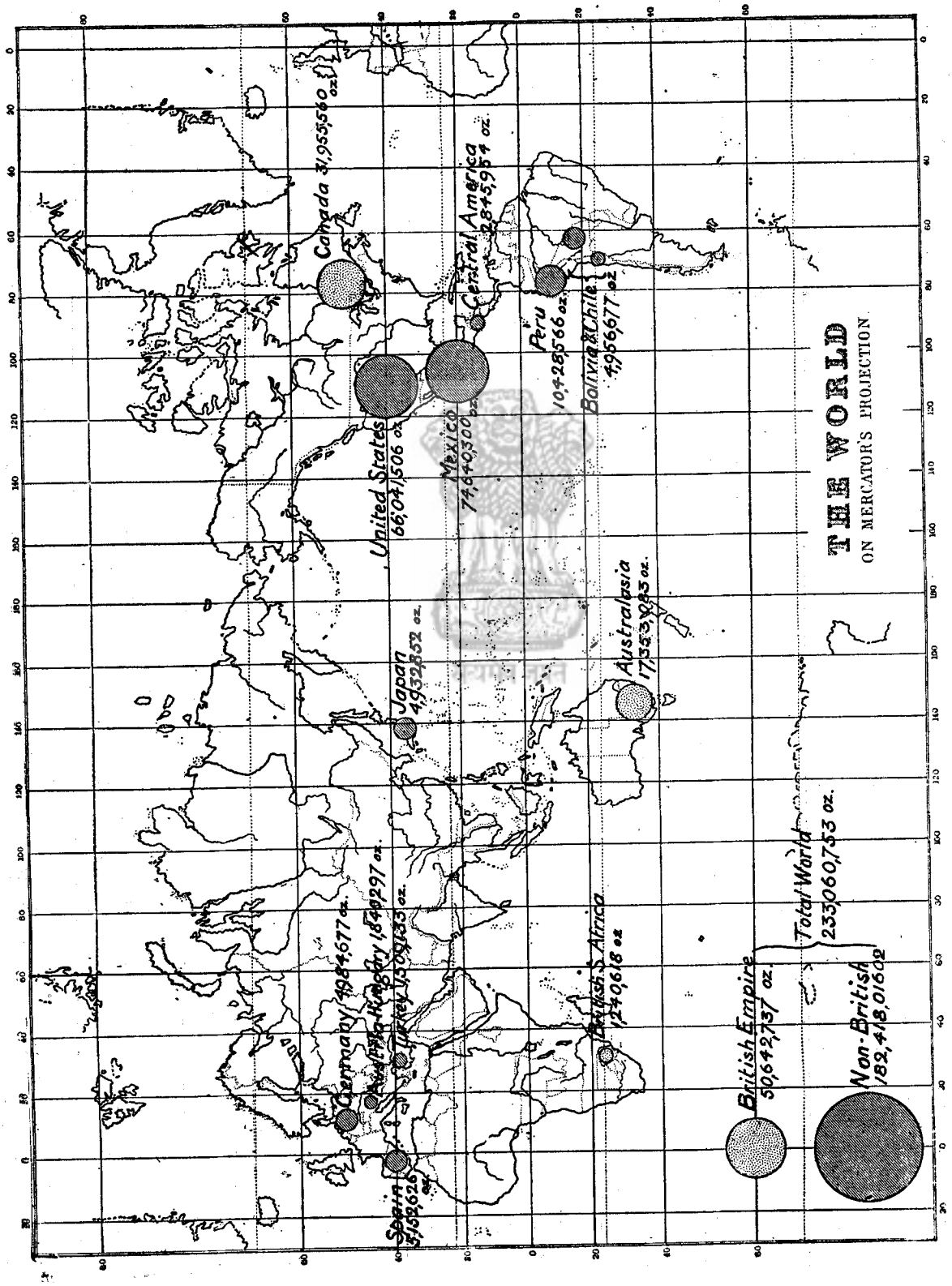


DIAGRAM 8.—WORLD'S MINE PRODUCTION of SILVER, 1912.

TABLE

MINE-PRODUCTION

(In Fine

—	1902.	1903.	1904.	1905.	1906.	1907.	1908.	1909.
Canada - - -	4,291,317	3,198,581	3,577,526	6,000,023	8,473,379	12,779,799	22,106,233	27,529,473
Mexico - - -	60,176,604	70,499,942	60,808,978	65,040,865	55,225,268	61,147,203	73,664,027	73,942,432
United States - -	55,500,000	54,300,000	55,999,864	56,272,496	57,362,455	52,500,104	50,878,140	57,315,677
TOTAL NORTH AMERICA	119,967,921	127,998,523	120,386,368	127,313,384	121,061,102	126,427,106	146,648,400	158,787,582
TOTAL CENTRAL AMERICA.	971,320	2,116,063	655,357	1,361,449	1,670,159	1,892,896	1,460,809	2,294,272
Bolivia - - -	8,288,721	5,190,747	3,200,989	2,852,976	3,540,450	4,794,474	5,040,180	5,035,260
Chile - - -	1,846,104	918,004	916,364	524,560	392,608	602,400	1,400,830	1,154,482
Colombia - - -	1,776,604	1,128.799	946,066	679,245	763,335	1,048,719	1,375,039	431,204
Peru - - -	4,264,528	5,491,690	5,138,027	6,156,336	7,397,982	6,642,153	6,394,647	6,676,556
Others - - -	48,098	92,592	67,246	150,149	28,032	27,364	254,376	492,706
TOTAL SOUTH AMERICA	16,224,055	12,821,832	10,268,692	10,363,266	12,122,407	13,115,110	14,465,072	13,790,208
Austria-Hungary - -	1,881,132	1,624,048	1,987,797	1,860,169	1,806,322	1,744,233	1,770,457	999,184
France - - -	384,339	747,359	298,103	890,555	719,453	794,973	592,042	629,848
Germany - - -	5,722,641	5,822,452	5,799,133	5,820,947	5,696,433	5,088,086	4,971,544	5,332,901
Greece - - -	1,090,188	718,148	727,069	829,025	829,025	829,025	829,025	829,025
Italy - - -	964,339	806,335	757,777	757,777	672,449	737,843	674,848	786,620
Russia - - -	167,358	161,453	172,912	204,960	166,183	132,122	132,122	132,122
Spain - - -	3,700,189	4,878,076	4,876,076	4,000,000	4,064,532	4,097,035	4,175,674	4,767,091
Turkey - - -	480,566	458,830	564,685	37,874	37,874	67,351	7,971	1,717,896
Others - - -	429,620	394,638	431,153	435,049	345,066	368,493	397,158	395,664
TOTAL EUROPE - -	14,820,372	15,611,339	15,614,705	14,836,356	14,337,337	13,859,161	13,550,841	15,590,351
British India - -	—	—	—	—	—	—	—	27,500
Japan - - -	1,853,222	1,887,407	1,984,674	2,664,842	2,530,093	3,073,411	3,887,397	4,130,972
Others - - -	118,302	179,445	182,889	182,889	248,240	335,454	571,953	465,980
TOTAL ASIA - -	1,971,524	2,066,852	2,167,563	2,847,731	2,778,333	3,408,865	4,459,350	4,624,452
British South Africa -	126,018	370,777	486,428	629,423	752,125	862,940	1,093,764	1,077,509
Others - - -	997	3,987	22,249	10,803	2,926	260,142	439,710	511,441
TOTAL AFRICA - -	127,015	374,764	508,677	640,226	755,051	1,123,082	1,533,474	1,588,950
New South Wales -	10,325,760	8,226,201	10,696,725	10,285,495	8,686,423	12,149,682	11,983,669	10,584,791
New Zealand - -	674,196	911,914	1,094,461	1,179,744	1,390,536	1,562,603	1,731,336	1,813,830
Queensland - -	701,312	642,125	654,929	601,712	783,087	921,497	1,162,276	1,001,383
Tasmania - - -	1,674,816	1,855,158	1,896,134	2,075,431	2,150,405	2,147,120	1,654,350	1,534,780
Others - - -	130,976	203,999	399,190	392,344	317,270	218,725	191,945	200,158
TOTAL AUSTRALASIA -	13,507,060	11,839,397	14,741,439	14,534,726	13,327,721	16,999,627	16,723,576	15,134,942
TOTAL WORLD -	167,589,267	172,828,770	164,342,801	171,897,138	166,052,110	176,825,847	198,841,522	211,810,757

SHOWING

OF SILVER.

Ounces.)

1910.	1911.	1912.	1913.	1914.	1915.	1916.	1917.	—
32,869,264	32,559,044	31,955,560	31,805,803	28,449,821	26,625,960	25,459,741	22,221,274	Canada.
71,372,194	79,032,440	74,640,300	70,703,828	27,546,752	39,570,151	22,838,400	31,214,000	Mexico.
57,598,509	61,108,791	66,041,506	71,200,237	69,633,769	72,368,878	78,875,176	70,665,531	United States.
161,839,967	172,700,275	172,637,366	173,709,868	125,630,342	138,564,989	127,173,317	124,100,805	TOTAL NORTH AMERICA.
2,026,885	1,211,749	2,845,954	2,135,641	2,754,868	2,920,496	2,602,500	2,369,500	TOTAL CENTRAL AMERICA.
4,652,169	4,112,241	3,986,394	3,986,394	2,300,000	2,475,884	2,495,300	2,435,200	Bolivia.
1,123,970	889,807	970,283	940,510	882,412	811,452	1,525,291	1,525,291	Chile.
866,093	817,431	587,683	587,683	351,271	351,271	309,400	325,000	Colombia.
8,120,470	9,304,242	10,428,566	9,617,692	9 214,763	9,466,353	10,787,928	10,865,061	Peru.
493,940	709,878	991,786	137,388	93,411	46,178	81,800	110,300	Others.
15,256,642	15,833,599	16,964,712	15,269,667	12,841,857	13,151,138	15,199,719	15,260,852	TOTAL SOUTH AMERICA.
1,540,808	1,538,772	1,840,297	2,104,107	1,572,746	1,772,699	1,500,000	1,500,000	Austria-Hungary
713,028	429,831	429,831	520,766	300,000	300,000	300,000	300,000	France.
5,597,026	4,984,677	4,984,677	4,984,677	4,000,000	4,000,000	4,000,000	4,000,000	Germany.
881,539	803,750	803,750	803,750	591,464	591,464	350,000	350,000	Greece.
468,566	998,576	447,761	423,888	510,365	493,856	486,500	450,000	Italy.
140,632	477,140	200,094	300,000	300,000	638,403	550,000	500,000	Russia.
4,152,430	4,152,430	5,152,626	4,231,815	4,228,593	4,565,396	4,517,800	4,500,000	Spain.
1,717,896	1,717,896	1,509,133	1,509,133	1,509,133	1,509,133	500,000	400,000	Turkey.
780,182	590,294	623,913	670,080	827,724	536,605	573,500	423,000	Others.
15,992,107	15,693,366	15,992,082	15,548,216	13,840,025	14,407,556	12,777,800	12,423,000	TOTAL EUROPE.
49,680	103,850	93,476	125,209	236,446	284,875	759,012	1,580,577	British India.
4,581,613	4,459,087	4,932,852	4,649,910	4,836,228	5,120,293	5,805,700	6,844,500	Japan.
630,824	475,426	478,204	532,791	69,711	88,836	103,700	142,400	Others
5,262,117	5,038,363	5,504,532	5,307,910	5,142,385	5,494,004	6,668,412	8,567,477	TOTAL ASIA.
1,045,358	1,136,927	1,240,618	1,094,911	1,052,557	1,181,612	1,169,600	1,162,000	British South Africa.
503,468	349,910	522,406	1,454	5,993	6,427	33,400	32,400	Others.
1,548,826	1,486,837	1,763,024	1,096,365	1,058,550	1,188,039	1,203,000	1,194,400	TOTAL AFRICA.
12,804,659	14,529,145	13,514,249	14,504,889	13,360,526	8,304,879	8,069,371	9,363,133	New South Wales.
1,711,235	1,311,043	801,165	975,616	599,162	957,541	787,053	780,000	New Zealand.
861,202	549,015	569,181	533,119	253,964	239,748	243,000	240,000	Queensland.
1,584,022	1,841,248	2,282,993	2,578,253	500,000	500,000	500,000	500,000	Tasmania.
201,189	188,937	185,495	16,195	16,553	16,514	232,300	250,800	Others.
17,162,307	18,419,388	17,353,083	18,608,072	14,780,205	10,018,682	9,831,724	11,135,933	TOTAL AUSTRALASIA.
219,088,851	230,383,577	233,060,753	231,675,739	176,048,232	185,744,904	175,456,472	175,049,967	TOTAL WORLD.

D.—PROCESSES BY WHICH SILVER IS EXTRACTED.

Introduction.

The winning of refined silver from its ores and those of associated metals which constitute additional sources of this metal always involves two and usually three distinct series of operations: (1) Extraction, (2) Refining, and (3) (whenever the silver is associated with gold) Parting.

So far as the first is concerned, the preliminary concentration of the metal, if not the complete series of operations, is usually carried out in the country where the ore is mined and indeed near the mine itself. Freight charges would otherwise be prohibitive of commercial success, since the silver generally does not amount to many ounces per ton of ore treated. The "bullion" thus produced is, however, not necessarily refined in the country of its origin. Refineries are, as a rule, situated near the markets for silver. They are of two kinds, viz., either they are independent concerns or they are attached to mints. The "parting" of the silver from the gold is also effected in the refineries. Most silver ores contained sufficient gold to necessitate this operation.

Certain of the ores contain the metal in the free state, *i.e.*, native. It may be coarse or fine. In others it is present in chemical combination with another element or other elements. In some ores the concentration of the silver is high, in others moderate, and again in others, low. These variations have, as their consequence, differences in the methods of extraction which can be grouped under the following heads:—

Extraction Processes.

(1) *Placers.*—The amount of silver obtained in this way is very small, probably less than 0·5 per cent. The source is placer gold, *i.e.*, the metal in the comparatively coarse state, and the silver is obtained from it by refining and parting.

(2) *Milling.*—This is suitable for dry and siliceous ores, a small percentage of which constitute what may be called "true silver ores," *i.e.*, ores treated solely for their silver values. By far the greater part consist, however, of gold-silver and silver-gold ores which are treated for the recovery of both metals. These processes may be grouped under two general headings:—

(*a*) The older, known as the amalgamation process, which is particularly suitable for ores containing native silver, in which the material, after being crushed, is treated with mercury which dissolves the silver, forming an amalgam. After the separation of this, the mercury is removed by distillation and the silver residue refined. This process, although in use in a few mills, is gradually being displaced by the cyanide process. At some mills, however, a combination of amalgamation and cyanidation is employed.

(*b*) The newer, known as the cyanide process. This is especially suitable for ores containing silver chloride, bromide, iodide, and sulphide, all of which are soluble in solutions of potassium cyanide. This process is also used for ores containing native silver in a finely divided condition. The operations at most modern plants are briefly as follows:—

(i) The ore, after being broken in rock breakers, is crushed in stamp batteries with or without cyanide solution.

(ii) As the majority of ores contain argentiferous and auriferous pyrites, the pulp is sent to concentration tables for separation and collection. The concentrate in most cases is still sold to smelters, but its treatment by cyaniding is receiving attention, and as soon as an efficient and profitable method has been worked out it will no doubt be dealt with at the mills themselves.

(iii) The pulp from the stamp batteries is "slimed" by fine grinding, thickened and then agitated in vats with potassium cyanide solution which dissolves out the silver. After agitation with air the slime is passed through vacuum filters or filter presses.

(iv) The solution from these is passed through zinc boxes or is treated with zinc dust, which precipitates the gold and silver. At Cobalt, Ontario, aluminium is used as the precipitant.

(v) The precipitate is then converted by melting with certain ingredients into "bullion."

The percentage of gold and silver extracted varies considerably. At the Esperanza Mining Co., El Oro, Mexico, it is only 60 per cent. of silver and 90 per cent. of gold. At the Coniagas Mill, Cobalt, it is about 80 per cent. At Pachuca it reaches 91·4 per cent. of silver and 97 per cent. of gold including the bullion obtained from the concentrates. At the West End Mill, Tonopah, Nevada, U.S.A., the extraction is 94·5 per cent. At the low grade Nipissing Mill, Cobalt, Ontario, the recovery is about 92 per cent., while at the high grade mill it is fully 99 per cent. These variations are due principally to the varying degrees of fineness to which the ore is crushed. In addition to the above processes, increasing quantities of old tailings from mills are being concentrated and cyanided. That these constitute an important source of the metal is evident from the fact that in 1912 the recovery in the U.S.A., excluding the production of Colorado, was 775,198 fine ozs.

In the above processes the payable limit of silver is from 2 to 3 ozs. per ton.

(3) *Smelting Processes.*—These are concerned with ores, which, although they contain silver values, are not primarily ores of silver. By far the most important of these are the ores of copper and lead. Lead-zinc ores furnish a not inconsiderable amount of silver, while small quantities are obtained from zinc ores and mixed ores.

(a) *Treatment of Copper Ores.*—Nearly all copper ores are silver-bearing and the copper is used as a collector of this metal. Moreover, there are cases in which very low-grade silver ores, which of themselves would not repay treatment, are used as fluxes in the smelting of copper ores, thus enabling a recovery of the silver to be made. The crude commercial product of the smelting process is known as "blister copper." It contains upwards of 98 per cent. of this metal and any gold or silver values which were either present in the original ore or intentionally added. As a result, a considerable concentration of these precious metals is effected. The copper is then refined electrolytically, this metal being deposited on the cathode while silver and gold collect in the vats in the form of anode sludge. The latter is subjected to a preliminary refining by melting, after which it is cast into bars of bullion.

(b) *Treatment of Lead Ores.*—These ores also invariably contain silver which is concentrated in them by the smelting process. Desilverisation of the pig lead thus produced is effected in one of two ways:—

(i) By crystallisation (the Pattinson Process).
(ii) By means of zinc (the Parkes Process).

In the former the enrichment of the silver cannot be carried beyond 650 ozs. per ton. In the latter, a zinc-silver and a zinc-gold alloy mixed with a certain amount of lead are obtained from which the zinc is separated by distillation. In both processes the silver is finally separated from the base metal by cupellation and refining. Its recovery is almost complete, only a minute amount being left in the desilverised lead.

(c) *Treatment of Zinc Ores.*—In the case of those ores which contain silver values, this metal accumulates as a silver lead residue in the retorts from which the zinc has been distilled. This residue is afterwards worked up and the silver separated by one of the processes mentioned in the preceding section.

(d) *Treatment of Lead-Zinc Ores.*—These are usually handled so as to produce two concentrates:—

(i) The one, rich in lead and poor in zinc, containing the greater part of the silver, which is smelted as a lead ore.
(ii) The other, rich in zinc and poor in lead, which is smelted as a zinc ore.

From these the silver is recovered by the methods just indicated.

(e) *Treatment of Complex Ores.*—The practice is hardly sufficiently standardised in the case of these materials to call for comment.

Thus the smelting processes effect an almost complete recovery of the silver, whereas the milling processes in most cases leave an appreciable amount of this metal in the ore body.

It has not been found possible to estimate what proportion of the world's silver production comes under each of the extraction processes which have been briefly considered. Data are unfortunately lacking in the case of Mexico, the largest producer of the metal. This country has no Government Department charged with the duty of issuing accurate data of extraction production, but, speaking broadly, it is justifiable to say that a considerable part of the Mexican output is effected by the cyanide process, to which treatment the low grade ores of this country are especially applicable. The United States of America, however, whose output is never far behind that of Mexico, publishes annually a statement giving the necessary information with regard to domestic production. The figures for 1911 and 1912 are given in the subjoined table:—

	1911.	1912.
Placers	0·3	0·2
Silver Mills—		
(1) by amalgamation	1·5	1·2
(2) by cyanidation	14·2	17·8
Total Milling	15·7	19·0
Smelting Processes*	84·0	80·8

From these figures it appears that in 1912 approximately four-fifths of the United States silver was extracted by smelting, and nearly one-fifth by milling processes.

(4) *Refining and Parting Processes.*—By whatever process the silver, whether auriferous or not, may have been extracted from its ore, it is necessary to melt the crude bullion and cast it into bars so that its value may be ascertained and that it may be put into a form convenient for transportation and sale. As has already been mentioned, the refining of the bullion is sometimes carried out in the works where the extraction has taken place. In a large number of cases, however, the unrefined bullion is sold to refineries which may be either in the same

* Both crude ore and concentrates.

or another country. This unrefined bullion which may be classified as "mill" bullion, obtained from mills, and "smelter" bullion, obtained from smelteries, is nearly always contaminated to a greater or lesser extent with base-metals. In all cases, therefore, where it is not refined at the smelting works, but is sold to an outside firm, it undergoes the following sequence of operations:—

(i) It is melted in crucibles (a rough refining operation being usually effected at the same time) and cast into ingot moulds.

(ii) Assay pieces are cut from the cast ingots or dipped from the molten metal before pouring, and assays are made on these by which the value and composition of the bars are ascertained.

(iii) The bars are then usually sold to refineries where the base-metals, *e.g.*, lead, bismuth, antimony, zinc, &c. are eliminated, and the gold and silver separated by parting and cast into bars separately.

Both before and after parting it is sometimes necessary to subject the bullion to further refining operations. The bars of gold and silver thus obtained, being of a high degree of purity, are in a condition to be used for minting and for the various industrial processes to which they are applied. The unrefined bullion varies greatly in composition. That obtained by the cyanide process is sometimes of very low standard, while that from the smelting works is usually much purer.

(a) *Methods of Refining.*—The processes in use are as follows:—

I. Volatilisation.
II. Oxidation—
  (i) by air blowing or roasting;
  (ii) Bessemerising;
  (iii) by nitre;
  (iv) by metallic oxides.
III. Chlorination.
IV. Sulphurisation.
V. The use of iron or carbon.

The method used depends partly on the composition of the bullion and partly on the means at the disposal of the operator. The operations are usually carried out in crucibles, although reverberatory or tilting furnaces are sometimes used for work on a large scale. Whatever method of refining is used the refined silver is usually cast in bars weighing from 1,000–1,200 ozs. Bars of mixed bullion, containing both gold and silver, are seldom cast of a greater weight than 600 ozs. The losses sustained in refining vary according to the composition of the metal, but in good practice they do not exceed 0·5 per cent. They are due partly to what may be called mechanical losses, from which a recovery can be made by collecting the "sweep" and refining it, and partly to volatilisation.

(b) *Methods of Parting.*—Parting is the separation of the silver from the gold in the refined metal. Numerous processes have been used from time to time to effect this separation, but at the present time only three methods are in use:—

I. Boiling in sulphuric acid which dissolves the silver, leaving the gold.

II. Passing chlorine gas through the metal, which forms chloride of silver. This floats on the top of the gold and can be separated by gravity.

III. Electrolytic processes. In these cases silver is recovered in a pure form by electrolysis in a silver nitrate solution, and gold by electrolysis in a gold chloride solution.

The purity of the fine silver obtained varies somewhat according to the parting method employed, but may be taken to be usually about 998 per thousand. Silver containing only about 0·5 parts of gold per thousand can be separated from it at a profit. In England silver bars are passed through a parting operation if they contain only two grains of gold per troy pound, that is, 0·35 parts per thousand. Such silver poor in gold (known as Doré silver) is not parted by itself, but is mixed with rich gold alloy.

The foregoing account covers all cases of the refining and parting of silver from bullion except that from lead-bullion, whose refining by cupellation has already been described under extraction processes.

E.—WORLD'S PRODUCTION OF SILVER BY CENTRES OF REFINING.

(Refinery Production.)

Method of obtaining Data.

In all cases where official records exist, the figures given by us have been taken direct from the official publication of the country under consideration. Most countries of the world possess a "Bureau of Mines" or its equivalent, which collects together the figures for the production of the more important minerals of the country. Such information is usually very complete with regard to "mine-production," but often is incomplete, or even entirely lacking, in regard to smelter and refinery output.

Where such information is unobtainable, reference has been made in the second instance to the Reports of the Director of the United States Mint. By means of the annual "interrogatory" issued to every country in the world, statistics are in most cases obtainable of the output and subsequent history of the precious metal. This source of information has been drawn upon freely.

It is worthy of note that, whereas the United States Mint is able to give details for the whole world, reasonably accurate, and within a year or so of the year to which the figures refer, the British Government is unable to give the figures even of its own country. In fact, it gives no answers as a general rule to the United States Mint series of questions, referred to above.

Where the replies to the "interrogatory" have been indefinite, or non-existent, reference has been made to the reports of the Metallgesellschaft, of Frankfort, which has long interested itself in the more common metals, and appears to be in touch with the chief metal producers of the world. A comparison of these figures with those of official sources shows them in most cases to be reasonably accurate. The Metallgesellschaft figures are therefore quoted in all cases where no other source of information exists.

Full details of the sources of information will be found under the respective headings of the countries themselves. A complete list of "authorities" is shown in Table XVII.

The meaning of "Refined Silver."

It has been found in collecting the data for this Report that the terms "refined silver," "silver bullion," and "refined silver bullion" have been in some cases used somewhat loosely Where no actual fineness is stated in this Report it may be taken that the figure given refers to "fine silver." In other cases the fineness of the bullion is inserted.

The following statement appears in a paper on "The Properties of Standard or Sterling Silver with Notes on its Manufacture," read before the Institute of Metals, in September, 1919, by E. A. Smith and H. Turner:—"Silver to be called 'fine' in the trade must not be under 998·0 fine. The fineness of the metal is always stamped on the bars when purchased, but the quality is always determined by the purchaser before it is passed for melting."

Details of the Refinery Production of each country, placed in the order in which they appear in the main table for the world's production, are given below. Where any additional information can be given for a particular country, such as, for example, an analysis of the production, reference is made to a supplementary table. In all other cases the production is shown only in the main Table 1.

It may be mentioned here that smelter production and mine production are in some cases identical—in countries, for example, treating only domestic ores. In other cases, where a high-class bullion may result from smelting and little refining is necessary, smelter and refinery production may be identical, or nearly so.

North America.

Canada.

The Canadian Department of Mines only began to include refinery production in its returns in 1908. These figures and a list of refineries are shown in Table 2. It will be noted that a large quantity of silver is obtained from Canadian material treated in the United States (Table 3).

Mexico.

There are no official figures for the refinery production of Mexico. A large proportion of the Mexican silver is refined in the United States, and appears in the table of United States production. Such figures as are to be obtained from United States Mint Reports are obviously "Mine production," while scattered figures obtained from consular reports are quite incorrect, and are usually, moreover, quoted as money values, so that little of the required data can be obtained. In view of these facts, the figures chosen for the main table are those of the Metallgesellschaft.

The principal producers of refined silver in Mexico are shown below:—

American Smelting and Refining Company, Monterey.
American Smelting and Refining Company, Aguascalientes.
American Smelting and Refining Company, Chihuahua.
American Smelting Securities Co., Velardena.
Compañia Metalurgica Mejicana, San Luis Potosi.
Compañia Metalurgica de Torreon, Torreon.
Compañia Minera de Penoles, Mapimi.

United States.

The official figures for domestic and foreign production, with details, are shown in Table 3. Previous to 1908 no statement was made as to the refining of foreign material. The required figures for this period, 1903–1908, are given by the Metallgesellschaft. The refinery production of the country is largely derived from the smelting of lead ores and copper ores. Silver produced in the cyanide process is obtained in the refining of gold-silver bullion resulting from that process. In the Twelfth Census of the United States (1899) it is stated that 32 smelters and refiners were engaged in lead smelting and refining: of these, 30 were smelting only, 8 were smelting and refining, whilst one was refining.

The following is a list of smelting and refining companies treating silver-lead materials as given by the "Mineral Industry," 1917:—

American Smelting and Refining Co., Denver.
American Smelting and Refining Co., Pueblo.
American Smelting and Refining Co., Durango.
American Smelting and Refining Co., Leadville.
American Smelting and Refining Co., Murray.
American Smelting and Refining Co., East Helena.
American Smelting and Refining Co., Omaha.
American Smelting and Refining Co., Perth Amboy.
Consolidated Kansas City Smelting and Refining Co., El Paso.
Bunker Hill and Sullivan Mining and Concentrating Co., Kellogg, Idaho.
Selby Smelting and Lead Co., Selby, Cal.
Ohio and Colorado Smelting Co., Solida, Cal.
United States Smelting Co., Midvale, Utah.
Pennsylvania Smelting Co., Carnegie, Penn.
International Smelting Co., Tooele, Utah.

The production of silver from copper ores is ultimately a question of electrolytic refining. A list of electrolytic refineries is here appended:—

Balbach Smelting and Refining Co., Newark, N.J.
Nichols Copper Co., Laurel Hill, New York.
Raritan Copper Works, Perth Amboy, N.J.
Baltimore Copper Smelting and Rolling Co., Canton, Ind.
American Smelting and Refining Co., Maurer, N.J.
United States Metals Refining Co., Chrome, N.J.
Anaconda Copper Mining Co., Great Falls, Mont.
Tacoma Smelting Co., Tacoma, Wash.
Calumet and Hecla Mining Co., Hubbell, Mich.

It may here be noted that the chief Canadian copper smelters are at Granby, Ladysmith, and Trail; Granby being the largest producer in British Columbia.

In addition to the private refineries noted above, there are Government refineries, treating bullion for coinage purposes, at San Francisco, Denver and New York, the refining work of the latter having been transferred from the Philadelphia Mint in 1913. The refining at New York is carried out in the New York Assay Office.

Central and South America.

The total refinery production of the countries under this heading is small, and is given in the main table (in what is obviously an estimate) by the Metallgesellschaft. We are of opinion that this estimate is decidenly too high. Fuller details are only available in the cases of Chile and Peru. A few notes on Bolivia also are appended.

Bolivia.

There is little refinery production properly so-called, such as can be traced, being mainly carried out in the Mint. It would appear from a Bolivian Mint report that in 1904 about 500,000 ounces of bar silver (fineness not stated) were produced, the production falling to a negligible figure in 1908. The National Bureau of Statistics (Bolivia) gives a few figures for silver production from 1904 to 1909 which are identical with those for the content of fine silver in exported sulphides, as quoted in the Mint report indicated above, and therefore do not represent refinery production. The Director of the United States Mint (1903) remarks, "That the statistics of gold and probably other minerals are only approximations and subject to large errors is seen in figures provided by the statistical office and in those of the customs office." This remark is made in connection with some figures for gold production, which, coming from the two offices mentioned, differ widely from one another.

The consideration of exports does not help much, as those of Bolivia and Chile usually appear as one total, and even then are given as "bullion," or coinage.

Chile.

Some notes on refinery production appear in Table 4.

Peru.

Table 5 shows the metallurgical output of Peru in analytical form. It will be seen that the proportion of bar silver produced is very small. The fineness of the bars is about 990. It is stated that, for the years, 1916 and 1917, the whole of the production as shown in the table was exported, with the exception of a small number of bars retained for use in the Mint. The production was exported to Liverpool, New York, Hamburg, and, in less quantity, to France and Belgium.

EUROPE.

Austria.

The figures given in the main table are quoted from the United States Mint Reports, and agree with those of the Metallgesellschaft.

Belgium.

The figures are shown in the main Table 1. The entire production is from imported lead and lead-zinc ores.

France.

The figures quoted are from the Metallgesellschaft and the United States Mint Reports.

Germany.

The analysis of these figures is supplied by the United States Mint Reports, the totals agreeing with those of the Metallgesellschaft, Table 6. Some of the more important refineries, with their output for the years 1903 and 1904, are shown below :—

	1903.	1904.
Mannsfelder Gewerkschaft - - -	3,130,059	3,222,169
Die Norddeutsche Affinerie - - -	2,398,808	2,722,655
Freiburg - - - - -	2,368,040	2,392,410
Clausthal - - - - -	1,203,406	1,510,375
Stolberg - - - - -	1,026,742	1,288,186
Braubach - - - - -	905,183	913,060
Rhein-Nassau - - - -	460,549	498,035
Friedrichshütte - - - -	318,574	387,825
Mechernich - - - - -	224,342	103,748

Great Britain.

The compilation of figures representing the smelter and refinery output in this country has proved to be one of the most difficult problems involved in the Report.

The obvious method at the outset appeared to be to find a Government return for smelting works comparable with "Mines and Quarries," which deals admirably with the mining output of the country. As will be seen in the Mining Section of the Report, however, the production of metal from Domestic Silver Mines is exceedingly small, in fact negligible, in comparison with that from other sources. It has has been thought desirable therefore to endeavour to obtain definite information on the smelting and refining aspects of production.

A letter to the Factories Branch of the Home Office elicited the information that the desired data could be obtained from the "Census of Production" Offices of the Board of Trade. The "Census of Production" was taken in 1908 in respect of the year 1907, as a direct consequence of the Census of Production Act of 1906. The census covers trades of all kinds. During the years 1909–1911 nine Summary Reports were issued, and in 1912 the Fiual Report. It appears that the aim of the organisers was to make the census quinquennial, so that the next census, whose publication has been delayed by the war, should be in respect of the year 1912.

The total output of "Refined Silver" in the United Kingdom in 1907 is given by the "Census of Production" as

43,979,000 troy ounces.

Of this sum 40,065,000 ounces is given as the output of "Silver Bullion" from factories engaged in refining gold and silver brought into the country, and in desilverising argentiferous lead, the production from the Royal Mint not being included. The balance, 3,914,000 ounces, is given as the output in "factories" not directly engaged in silver refining. The total is described as "Refined Silver," as indicated above, so that "Silver Bullion" and "Refined Silver" are loosely employed as synonymous terms.

The returns shown above are stated to be "substantially free from duplication," that is to say they represent "production" without reference to any re-melting of previously refined material. They do not include any metal in circulation in the jewellery and similar trades, which handle and re-melt silver which has already appeared as "production."

As these particulars related to one year only, an attempt was made to obtain similar figures for the subsequent years, 1908 to 1914. For these figures the authors of this Report were referred to the Controller of Non-Ferrous Materials, Ministry of Munitions. He informed us that his "Department is not responsible for precious metals with the exception of platinum, and, therefore, has no official records to refer to as to the 'production of silver'." He in turn referred us to a trade handbook, which gave figures for two years only, which were manifestly impossible.

Further inquiries being equally fruitless, the following fact was definitely established :— There is no published figure for the annual production of metallic silver in smelters and refineries in the United Kingdom in modern times (with the single exception of the year 1907) which may be considered as bearing the authority of a Government Department. It would also appear that the Government Departments concerned with statistics such as these are utterly lacking in co-ordination, and are quite ignorant as to the data actually available.

In the absence of official statistics an attempt was made to obtain the information at first-hand in the following way: All the firms known to be engaged in silver smelting and refining were circularised and invited to state their annual output for a given period of years, on the distinct understanding that any figures supplied were to be regarded as strictly confidential, and only published when incorporated in one grand total for the United Kingdom. No information in respect of individual firms would thus be revealed. This method appears likely to yield the most reliable information on the subject, provided all the firms handling silver are reached in this way, and that duplication is avoided.

The invitation met with a favourable response, most of the firms approached readily giving us the desired information. The grand total for the United Kingdom obtained in this way is shown in the Table 7.

Silver Smelters and Refiners in Great Britain.

Avelino Aramayo & Co, London.
Thomas Bolton & Sons, Widnes.
Cape Copper Co., London.
Cookson & Company, Newcastle-on-Tyne.
J. R. Down & Co., Swansea.
H. J. Enthoven & Sons, London.
The Greenside Mining Co., Penrith.
Johnson, Matthey & Sons, London.
Johnson & Sons, Finsbury.
Locke, Blackett & Co., Newcastle-on-Tyne.
Locke, Lancaster and W. W. & R. Johnson & Sons, London.
Morris & Company, Doncaster.
J. Nicholson & Sons, Leeds.
H. L. Raphael, London.
N. M. Rothschild & Sons, London.
The Sheffield Smelting Co., Sheffield.
Sheldon, Bush and P.S. Co., Bristol.
The Tharsis Sulphur and Copper Co., Glasgow.
W. Turner & Co., Sheffield.
United Alkali Company, Widnes.
Vivian & Sons, Swansea.
Walkers, Parker & Co., Newcastle, Chester, Lambeth.

In order to test the accuracy of the figures thus obtained, those for the corresponding years given by the Metallgesellschaft are shown. A comparison of the two sets indicates very considerable discrepancies between them. Only in respect of the production for 1908 is there fair agreement. For the rest the figures obtained by us are, except for 1909, considerably larger. We are of opinion that as between these two, the data of the Metallgesellschaft are probably nearer the true figure. They accord much better with the total world's production for the years in question. We think that the explanation of the higher figures obtained by us is probably to be found in the view that the refineries have not in all cases separated smelter from refinery production, and that some duplication has occurred.* In any case both sets of figures furnish strong evidence that the Census of Production figure for 1907 is considerably too large, and it is quite certain that it includes a large amount of smelter as well as refinery production. It will be observed that that figure is rather more than double the one obtained by us, and considerably more than double that of the Metallgesellschaft. We think therefore the conclusion is justified that the silver has been counted twice over, firstly as smelter and secondly as refinery production.

It may be well to consider the various figures which may be obtained, or deduced, from such published Government returns as are available.

The silver obtained "metallurgically" in the United Kingdom is derived from the following sources:—

(1) Gold Ore, mined in the country.
(2) Silver Ore, „ „ „
(3) Copper Ore, „ „ „
(4) Lead Ore, „ „ „
(5) Imported Lead Ore.
(6) Imported Copper Ore and "Regulus" or "Matte."
(7) Imported Argentiferous Lead.
(8) Imported Unrefined Bullion.
(9) Imported "Complex" Ores, and Concentrates.
(10) Imported Gold, containing Silver.

(1) *Gold Ore.*—As may be seen from Table 8, the quantity of silver contained in domestic gold ore is exceedingly small. The Home Office statistics describe this silver as "obtainable," and it is reasonable to suppose that it was extracted with the gold and separated later in the ordinary course of gold refining.

* Be this as it may the conclusion appears to be justified that between 1906 and 1912 the refinery production was never less than 16 million ounces and in one year reached 21 million ounces.

(2) *Silver Ore.*—No silver ore, as such, has been mined in this country since 1907. It will be seen from Table 8 that such ore was only produced for five years. The silver in this ore is also described as "obtainable," and was probably extracted at smelters treating argentiferous lead or copper ores.

(3) *Copper Ore.*—It will be seen from Table 8 that the output of silver from domestic copper ores is negligible.

(4) *Lead Ore.*—The output of lead ore, and the silver contained therein, is shown in table (9). It will be noted that the mean value in silver is 5·2 ozs. per ton. The output of this ore has fallen fairly steadily since 1872, the actual fall in annual output from that date to 1913 being from 73,500 tons to 24,300 tons. With regard to the silver content, this is again described as "obtainable." It is presumably obtained in the course of the extraction of the lead content with subsequent de-silverizing.

A small quantity of this ore is exported. The actual amount, with the silver left available for extraction in this country, is shown in Table 11. These exports are mainly to Belgium.

(5) *Imported Lead Ore.*—The annual tonnage of imported lead ore is shown in Table 12. The chief sources of these imports are France, Tunis, Rhodesia, Western Australia, and Peru. It is not possible to give a figure for the silver content of these ores, coming as they do from widely differing localities.

A small proportion is re-exported chiefly to Germany and Belgium. The figures for these exports are also shown in Table 12.

(6) *Imported Copper Ore, Regulus, &c.*—The imports of copper ore are indicated in Table 13. Most of this ore is derived from Chile, Venezuela, and Western Australia. The greater part is consigned to Liverpool and Swansea, and treated in those districts, yielding in most cases a considerable quantity of silver.

The imports of "regulus," probably rich in silver, are mainly to Liverpool and Swansea, and derived from Mexico, Cape of Good Hope, and Spain, and in lesser degree from New South Wales, Portugal, and Chile. A small proportion of this ore and regulus is re-exported but the greater part is smelted for copper, which is electrolytically treated for silver.

In addition to the true copper ores, treated by smelting, quantities of cupriferous iron pyrites are imported, mainly from Spain and Norway and consigned to Liverpool and Glasgow, Swansea, and Newcastle. These are treated by "burning," followed by a wet process. By this means the silver is extracted, and also the comparatively small quantity of copper present. The annual imports of such ores, with the quantities of "burnt ore" treated and the silver produced therefrom, are shown in Table 14. It will be noticed that the output of metallic silver from this class of material is maintained at a very steady figure.

(7) *Imported Argentiferous Lead.*—The imports of pig lead, presumably to a great extent argentiferous, are shown in Table 15. It is regrettable that the Board of Customs and Excise have deprived these figures of their value for the purposes of this Report by combining the imports of pig lead with those of sheet lead, which is usually almost silver-free. One the most important sources of the smelter production of silver is thus rendered untraceable, as far as actual quantity is concerned. Taking the figures as they stand, the imports are about one-third from New South Wales, most of the remainder coming from the United States, Mexico, Queensland, and Tasmania.

It is quite impossible to give a reliable figure for the quantity of silver obtainable from this material.

A small proportion of this foreign lead is re-exported, chiefly to Russia and Germany.

(8) *Imported Unrefined Bullion.*—Such figures as are available for these imports are shown in Table 16. The Board of Customs and Excise has not considered it necessary in the past to report separately the "refined bullion" and "unrefined bullion." Such separation was made for the first time in 1914. No definition is given of "refined bullion." Whether this is fine silver, or precisely what is really meant, is not stated.

The unrefined bullion is probably treated partly by, or on behalf of, the Royal Mint, and partly by the large refiners, whose output of refined silver is included in the grand total for the United Kingdom.

(9) *Imported "Complex" Ores and Concentrates.*—Under this heading may be included zinc ores, lead-zinc ores, &c., for which no data are available.

(10) *Imported Gold, containing Silver.*—Quantities of gold containing silver, are imported into this country from South Africa, Australia and India. This silver is extracted in the course of refining the gold by, or on behalf of, the Royal Mint, and by the larger refining firms.

The South African gold carries silver to the extent of about 9 per cent.

Hungary.

These figures are shown in the main table. The refineries in Hungary treat only silver from domestic ores. The mine production should therefore tally with the refinery production. In cases where there is a small difference, the refinery production being the greater, it means that some argentiferous material has been carried forward from a previous year.

Italy.

This production is shown in the main Table I., the data being obtained from Italian sources. The silver is derived mainly from lead ores.

Norway.

Production is shown in the main Table I. The figures differ little from mine production, being derived from the native silver mines of Kongsberg.

Russia.

These figures are shown in the main table. Some of the gaps have been filled in by the Metallgesellschaft, which, however, merely provides estimates of 150,750 ounces per annum. It is not possible to obtain any reliable data for this country. The leading silver producer is the Kyshtim Corporation, whose output constitutes 50 per cent. of the total Russian production. The output of silver bullion from the smelters is refined in Government refineries. The silver is produced mainly from the smelting of copper and lead ores, part of the resulting bullion being refined in the country, the remainder being treated in Germany. Much silver is obtained also in Russia as a by-product in the electrolytic refining of copper.

Spain.

These figures are shown in the main table, and are quoted from the "Revista Minera." Most of this production is derived from domestic lead ores, the greater part of the argentiferous copper pyrites, &c., being exported and de-silverized elsewhere.

Sweden.

The output of refined silver is small, and is derived mainly from the remelting of jewellers' scrap, &c.

Turkey.

The only refining carried out is at the Mint.

ASIA.

British India.

No refining was carried out in India before the war. Silver was obtained as a by-product in the smelting of lead zinc ores at Bawdwin and the resulting bullion containing gold and silver exported and refined at its destination. During the war, however, refineries were built and operated and the metal is now refined in the country.

Japan.

The figures given in the main table are those of the Metallgesellschaft, and are the only data available.

AUSTRALASIA.

New South Wales.

The figures given for this State represent the New South Wales silver refined in Australasia. During the war the Government eliminated all enemy control from the lead-zinc smelting of the State. As a direct result of this, an extension was made of the Broken Hill Associated Smelters Proprietary, Limited, which took over the Broken Hill Proprietary Works at Port Pirie. The concern is engaged in the concentration and smelting of silver-lead ores and the refining of silver-lead bullion. It has the largest silver-lead smelting works in the world, with a capacity for an output of 200,000 tons of pig lead and 6,000,000 ounces of silver per annum. The addition of a large lead, silver, and gold refinery is in hand at the Cockle Creek Smelting Works, N.S.W., and when this is erected the Sulphide Corporation will be self-contained.

The importance of New South Wales as a silver-lead producer may be gauged from the fact that in 1915 this State produced 95 per cent. of the total output of silver-lead minerals in Australasia. Silver is also obtained from gold in the Sydney Mint.

New Zealand.

The export figures for this State represent the production. Some 50 per cent. of these exports go to Ceylon, the remainder to New South Wales and the United Kingdom. Most of the silver is obtained in refining the bullion from the quartz mines (gold) of the Hauraki Goldfield.

Victoria.

The refinery production of this State is small, and is all obtained in the refining of gold in the Melborne Mint.

Western Australia.

This production is all obtained in the refining of gold at the Perth Mint.

As an indication of the quantities of silver to be expected from the Australian mint refineries, it may be stated that in 1914 the average composition of parcels of bullion (partially refined before reaching the mints) received at the three mints in question was as shown below:—

Sydney Mint.		Melbourne Mint.		Perth Mint.	
Gold	880·1	Gold	916·3	Gold	814·3
Silver	85·2	Silver	43·7	Silver	118·6
Base	34·7	Base	40·0	Base	67·1

The quantities of gold received at these Mints in 1914, with the origin of this gold, are indicated below (ounces):—

Origin.	Sydney.	Melbourne.	Perth.
New South Wales	107,918	9,515	—
Victoria	—	433,681	—
Queensland	259,358	2,801	—
South Australia	—	8,802	—
Western Australia	188	6,227	1,460,298
Tasmania	1,664	17,490	—
New Zealand	151,829	36,464	—

AFRICA.

South Africa:

The "Year-Book of the Union of South Africa" states—"the only silver won in the country is that contained in the gold bullion, of which it forms about 9 per cent. by weight." The whole of this is exported and usually refined in Great Britain.

SUMMARISED FIGURES.

Our investigations lead to the following figures for the world's refinery production for the year:—

	1912.	
	Ounces.	Per cent.
Canada	17,572,217	6·7
Mexico	37,268,280	14·2
United States	130,416,909	49·6
TOTAL NORTH AMERICA	185,257,406	70·5
Central and South America	6,430,000	2·5
TOTAL NEW WORLD	191,687,406	73·0
Europe	59,315,768	22·6
Asia	4,787,135	1·8
Australasia	6,744,233	2·6
TOTAL OLD WORLD	70,847,136	27·0
TOTAL WORLD	262,534,000	—
British Empire	47,942,450	18·2

The geographical distribution of the principal refining countries is shown in Diagram 9 by circles whose areas are approximately proportional to refinery output.

According to these figures the New World refined nearly three-quarters of the silver production in 1912. Of this almost the whole was effected in North America. The United States was responsible for about one-half of the world's production. Mexico was the second largest refiner. In compiling this Table we have included, as the production of Great Britain, the figure obtained as the result of our "questionnaire" to the refineries in this country According to this, Great Britain follows Mexico as the third largest refiner, and is succeeded by Canada and Germany (whose production was almost identical), Belgium, New South Wales, Japan and Spain in order of importance.

The figure, 262 million ounces of refined silver, in the year in question is, however, almost certainly too high. We have already expressed the view that the Metallgesellschaft estimate for Central and South America is too large, and we doubt whether anything like six million ounces was refined in those countries. Again, it is our opinion that the Metallgesellschaft

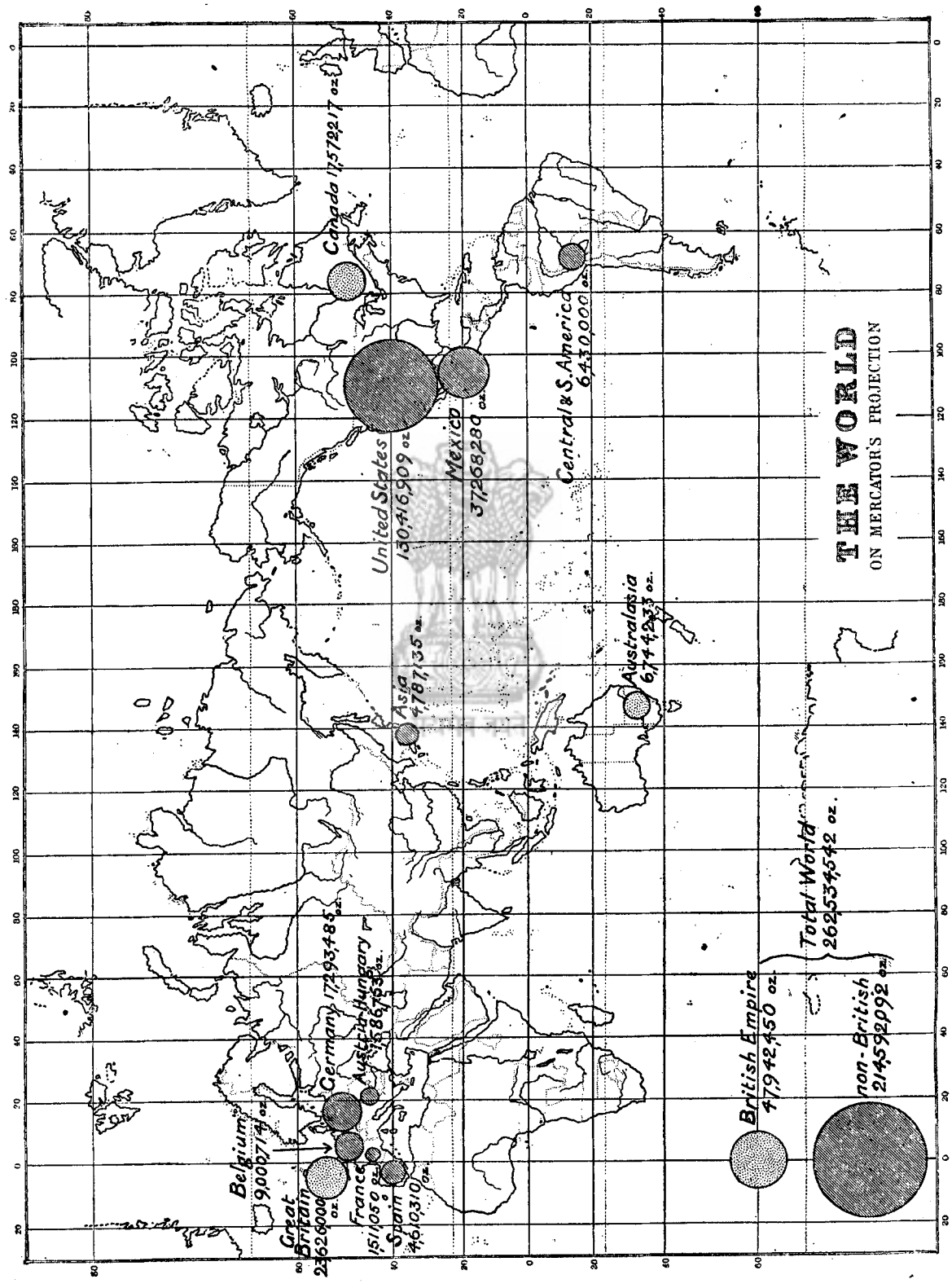


DIAGRAM 9.—WORLD'S REFINERY PRODUCTION OF SILVER, 1912.

estimate for Great Britain is probably nearer the truth than our own figure, though we have spared no pains in attempting to avoid duplication. If we make allowance for these two factors a reduction of about 14 million ounces is obtained, thus reducing the world's production to 248 million ounces for the year in question. Even this leaves the refinery production some 16 million ounces in excess of the mine production for the same year, a figure which appears to be improbably large, and the conclusion is forced upon us that some duplication between smelter and refinery production exists in the figures quoted for other countries (with the probable exception of the United States of America). We must admit therefore that the same degree of reliability does not attach to the figures in Table 1 which we have obtained for refinery production as to those for mine production.

The following represent the average figures of the Refinery Production of Silver for 1907–11 :—

	Ozs.	Per Cent.
Canada	12,301,360	5·2
Mexico	31,555,225	13·3
United States	122,637,725	51·8
TOTAL NORTH AMERICA	166,494,310	70·3
Central and South America	6,430,000	2·7
TOTAL NEW WORLD	172,924,310	73·0
Europe	52,281,951	22·0
Asia	3,652,883	1·6
Australasia	8,131,335	3·4
TOTAL OLD WORLD	64,066,169	27·0
TOTAL WORLD	236,990,479	—
British Empire	42,842,895	18·1

It will be seen that the percentages of the various continents approximate closely to those for the year 1912.

TABLE 2.

Canada.

Refinery Production:

	Ozs.		Ozs.
1908	11,168,689	1911	19,078,768
1909	14,242,545	1912	17,572,217
1910	16,373,799	1913	13,789,709

The above figures constitute domestic production, except for a *small* quantity. The Canadian Department of Mines only began to include smelter production in its returns in 1908, in the "Annual Report on the Mineral Production of Canada." This information can now be given for individual smelters and refineries, of which a list is appended. Large quantities of bullion are also refined at the Ottawa Mint.

The Mond Nickel Co., Victoria Mines, Ont.
The Canadian Copper Co., Copper Cliff, Ont.
The Coniagas Reduction Co., Thorold, Ont.
Deloro Mining and Reduction Co., Deloro, Ont.
Consolidated Mining and Smelting Co., Trail, B.C.
*Northport Smelting and Refining Co., Northport, Wash.
Granby Consolidated Mining, Smelting and Power Co., Grand Forks, B.C.
British Columbia Copper Co., Greenwood, B.C.
Tyee Copper Co., Ladysmith, B.C.
Canadian Antimony Co., St. George, N.B.

* This refinery, in the States, only treats Canadian material, and is therefore included.

TABLE 3.

United States Refinery Production. (Troy Ounces.)

Year.	Domestic Production.	Mexican Sources.	Canadian Sources.	Central American.	South American.	Philippines and Cuba.	Others.	Total Foreign.	Total Refined.
1901	55,214 000	—	—	—	—	—	—	—	—
1902	55,500,000	—	—	—	—	—	—	46,897,750	102,397,750
1903	54,300,000	—	—	—	—	—	—	43,757,500	98,057,500
1904	55,999,864	—	—	—	—	—	—	41,504 656	97,504,520
1905	56,101,600	—	—	—	—	—	—	38,589,795	94,691,395
1906	56,517,900	—	—	—	—	—	—	42,812,740	99,330,640
1907	56,514,700	—	—	—	—	—	—	57,781,765	114,296,465
1908	52,440,800	45,000,000	16,000,000	—	—	—	4,107,220	65,107,220	117,548,020
1909	54,721,500	42,000,000	20,250,000	5,500,000		—	4,132,005	71,882,005	126,603,505
1910	55,691,741	41,000,000	10,000,000	—	—	Spain 1,000,000 Peru 1,500,000 Bolivia 3,000,000	3,457,106	68,957,106	124,648,847
1911	60,399,400	40,277,675	18,994,490	1,951,331	6,121,280	Yukon 54,914	2,292,697	69,692,387	130,091,787
1912	63,766,800	41,804,441	13,118,334	10,167,401		15,482	1,544,451	66.650,109	130,416,909
1913	66,801,500	28,828,540	9,206,153	2,232,798	7,679,307	18,832	2,743,060	50,708,690	117,510,190
1914	72,455,100	19,613,774	7,084,354	2,458,094	5,432,676	51,542	5,118,689	39,789,129	112,244,229

TABLE 4.

Chile.

Refinery Production:

	Ounces. A.	Ounces. B.
1903	609,918	580,243
1904	—	—
1905	208,814	197,947
1906	213,958	210,359
1907	366,414	335,421
1908	759,865	715,016
1909	352,653	330,952
1910	350,245	312,434
1911	—	—
1912	215,533	200,455
1913	300,828	282,245
1914	318,349	287,163
1915	216,819	213,733
1916	313,687	266,459

Strictly speaking, no refining is done in Chile. The above figures represent the production of metallic silver in the few smelters working. The figures in column A are the production of silver bullion, of an average fineness of 933, the equivalent quantities of fine silver being shown in column B.

(Authority) "Estadistica Minera de Chile."

TABLE 5.

Silver Production of Peru. (Troy Ounces.)

Year.	Silver Bars.	Silver in Copper.	Silver in Lead Bars.	Silver in Copper Mattes.	Silver in Sulphides.	Silver in Ores and Concentrates.	Silver in other Materials.	Total Silver.
1903	631,780	—	86,226	1,468,001	1,025,263	2,273,712	6,365	5,491,348
1904	335,396	514	73,270	1,493,206	589,470	2,157,844	17,007	4,699,237
1905	328,348	—	172,163	1,273,268	1,054,777	3,327,364	—	6,155,953
1906	279,255	90,406	156,088	1,253,914	883,257	4,741,032	—	7,397,522
1907	252,120	1,296,159	103,105	1,366,953	955,562	2,665,813	1,993	6,641,695
1908	194,733	1,543,746	101,465	1,973,045	748,388	1,830,331	2,540	6,394,249
1909	453,219	1,762,366	89,970	2,450,248	673,960	1,211,187	3,440	6,676,140
1910	318,189	2,138,489	110,049	3,284,701	650,426	1,715,505	2,604	8,119,963
1911	301,609	2,284,579	130,368	4,174,709	833,842	1,571,652	6,912	9,303,663
1912	261,188	3,159,927	151,105	3,921,946	1,117,373	1,824,383	1,993	10,427,915
1913	259,579	3,015,702	82,079	3,711,428	873,065	1,631,483	43,724	9,617,093
1914	144,321	5,485,144	84,136	1,611,518	908,044	948,200	32,825	9,214,190
1915	265,687	6,175,307	93,357	1,220,510	907,755	761,955	39,190	9,465,763
1916	126,799	7,501,205	60,805	1,564,162	676,307	793,269	64,718	10,787,257
1917	87,416	8,990,811	58,834	219,906	713,923	744,819	48,675	10,864,385

TABLE 6.

Germany.

Refinery Production:

Year.	Domestic Ores.	Ounces.		
		Foreign Ores.	Sweeps &c.	Total.
1900	5,412,453	6,291,690	1,661,769	13,965,912
1901	5,522,663	6,364,671	1,094,740	12,982,074
1902	5,735,849	6,881,643	1,226,619	14,844,111
1903	5,799,024	5,428,013	1,512,532	12,739,569
1904	5,810,662	4,927,502	1,794,774	12,532,938
1905	5,818,410	5,208,878	1,828,660	12,855,948
1906	5,696,433	5,024,305	1,928,389	12,649,127
1907	5,088,091	5,310,955	2,040,818	12,439,864
1908	4,971,547	5,769,542	2,370,773	13,111,862
1909	5,332,913	5,374,323	2,170,864	12,878,100
1910	5,597,026	5,043,370	2,862,636	13,503,032
1911				
1912				
1913				

(Authority) United States Mint.

TABLE 7.

Great Britain.

Refinery Production:

Year.	Ounces.	
	Figures obtained by the Authors direct from Refiners.	Metallgesellschaft Reports.
1903	—	—
1904	—	—
1905	—	17,132,735
1906	20,685,000	15,637,760
1907	21,451,000	16,978,415
1908	20,923,000	20,035,880
1909	19,078,000	21,325,095
1910	24,631,000	17,235,615
1911	25,968,000	16,052,495
1912	23.626,000	—
1913	23,111,000	—

TABLE 8.

Home Office Reports.

Year.	A.	B.	C.	D.	E.	Total.
1900	3,008	—	—	187,842	309,486	500,336
1901	742	—	—	173,724	292,652	467,118
1902	733	—	—	145,873	283,674	430,280
1903	896	21,140	—	152,855	301,298	476,189
1904	1,927	16,170	—	141,592	308,900	468,689
1905	730	3,440	—	163,399	322,291	489,860
1906	259	435	—	147,647	320,045	468,386
1907	204	2,959	—	150,521	335,683	489.367
1908	114	—	—	135,154	331,745	467,013
1909	140	—	—	142,006	317,461	459,607
1910	473	—	—	136,192	346,504	483.169
1911	63	—	—	118,395	326,271	444,729
1912	288	—	3,988	118,540	334,425	457,423
1913	27	—	9,865	128,154	367,514	505,560

A. Gold Ore
B. Silver Ore
C. Copper Ore
D. Lead Ore
} Silver in these described as "obtainable."

E. Foreign Cupriferous Pyrites, Silver "obtained."

TABLE 9.

Output of Lead Ore in Great Britain with Quantity of Silver obtainable therefrom.

Year.	Lead Ore. (Tons.)	Silver obtainable. (Ounces.)
1900	32,010	187,842
1901	27,976	173,724
1902	24,606	145,873
1903	26,567	152,855
1904	26,374	141,592
1905	27,649	163,399
1906	30,795	147,647
1907	32,533	150,521
1908	29,249	135,154
1909	29,744	142,006
1910	28,534	136,192
1911	23,910	118,395
1912	25,409	118,540
1913	24,282	128,154

TABLE 11.

Production of Lead Ore in Great Britian, and Exports of British Lead Ore. (Tons.)

Year.	Ore Production.	British Ore exported.	British Ore available.	Silver available (oz.).
1900	32,010	1,482	30,528	158,746
1901	27,976	2,319	25,657	133,416
1902	24,606	1,978	22,628	117,666
1903	26,567	1,924	24,643	128,143
1904	26,374	1,380	24,994	129,969
1905	27,649	3,535	24,114	125,393
1906	30,795	6,401	24,394	126,849
1907	32,533	7,283	25,250	131,300
1908	29,249	4,788	24,461	127,197
1909	29,744	3,263	26,481	137,701
1910	28,534	1,497	27,037	140,592
1911	23,910	2,840	21,070	109,564
1912	25,409	2,412	22,997	119,584
1913	24,282	3,558	20,724	107,785

The figures given in the last column for silver available are derived from the figures for British ore available by multiplying the tonnage by 5·2, which is the average silver content of the ore in ounces per ton.

TABLE 12.

Imports of Foreign Lead Ores into Great Britain, and Exports of Foreign Lead Ores from United Kingdom. (Tons.)

Year.	Imports.	Exports.	Foreign Ore available.
1900	21,219	6,491	14,728
1901	29,472	8,438	21,034
1902	25,431	13,795	11,636
1903	18,625	3,104	15,521
1904	8,610	1,595	7,015
1905	9,397	2,945	6,452
1906	8,730	693	8,037
1907	13,394	2,896	10,498
1908	23,484	8,475	15,009
1909	15,542	5,631	9,911
1910	18,093	7,102	10,991
1911	17,259	4,896	12,363
1912	15,720	1,335	14,385
1913	18,453	119	18,334

TABLE 13.

Imports of Foreign Copper Ore and Regulus into Great Britain, and Exports of Foreign Copper Ore and Regulus from Great Britain.

	Imports (Tons).		Exports (Tons).		Available (Tons).	
	Ore.	Regulus.	Ore.	Regulus.	Ore.	Regulus.
1900	100,753	87,739	1,292	73	99,461	87,666
1901	100,889	91,868	2,354	37	98,535	91,831
1902	88,590	73,508	6,366	1,210	82,224	72,298
1903	83,995	76,657	245	2,006	83,750	74,651
1904	79,145	66,672	112	498	79,033	66,174
1905	92,689	69,129	83	88	92,606	69,041
1906	96,249	74,875	308	583	95,941	74,292
1907	103,742	71,950	2,475	2,862	101,267	69,088
1908	110,129	69,997	2,710	1,049	107,419	68,948
1909	89,153	65,292	2,517	32	86,636	65,260
1910	98,179	68,974	222	Nil	97,957	68,974
1911	86,596	64,873	179	98	86,417	64,775
1912	98,226	51,565	150	1,092	98,076	50,473
1913	94,265	39,110	493	723	93,772	38,387

TABLE 14.

Production of Silver in Great Britain from Imported Pyrites, mainly cupriferous. (Ounces.)

Year.	Imports (tons)	Burnt Pyrites treated (tons).	Silver obtained.
1900	741,431	386,858	309,486
1901	653,584	365,816	292,652
1902	611,169	354,593	283,674
1903	735,909	376,621	301,298
1904	742,837	386,124	308,900
1905	698,746	402,863	322,291
1906	759,324	400,055	320,045
1907	769,141	419,603	335,683
1908	758,910	414,680	331,745
1909	791,068	396,825	317,461
1910	812,247	433,129	346,504
1911	849,921	407,838	326,271
1912	907,157	418,031	334,425
1913	781,711	459,392	367,514

TABLE 15.

Imports of Foreign Lead into Great Britain, and Exports of Foreign Lead from Great Britain. (Tons).

Year.	Imports, Pig and Sheet.	Exports, Pig and Sheet.	Pig and Sheet Available.
1900	195,380	13,182	182,198
1901	218,060	12,904	205,156
1902	231,813	9,347	222,466
1903	229,271	10,977	218,294
1904	246,508	20,894	225,614
1905	229,545	18,886	210,659
1906	208,253	13,536	194,717
1907	204,695	13,288	191,407
1908	237,508	10,195	227,313
1909	207,660	7,875	199,785
1910	218,936	13,463	205,473
1911	213,707	17,956	195,751
1912	205,375	11,658	193,717
1913	204,136	13,590	190,546

TABLE 16.

Imports of Silver Bullion, refined and unrefined, exclusive of Coinage, into Great Britain.
(Ounces).

Year.	Refined.	Unrefined.	Total.
1900	—	—	—
1901	—	—	93,115,512
1902	—	—	84,091,466
1903	—	—	77,172,419
1904	—	—	94,949,735
1905	—	—	105,324,638
1906	—	—	90,033,070
1907	—	—	90,352,127
1908	—	—	92,265,850
1909	—	—	112,150,631
1910	—	—	118,965,175
1911	—	—	130,957,323
1912	—	—	130,682,193
1913	—	—	114.997,172
1914	91,754,293	5,097,398	96,851,691
1915	92,293,263	1,036,623	93,329,886

The figures for refined and unrefined bullion were not reported separately prior to 1914.

Authority.

Annual Statement of Trade of United Kingdom, by Statistical Department of Board of Customs and Excise.

TABLE 17.

Authorities consulted in obtaining the Figures of Refinery Production.

Annual Reports, Bureau of Mines, Ottawa.
" " " " Ontario.
" " Minister of Mines, British Columbia.
Statistics of Metallbank und Metallurgische Gesellschaft.
Reports of Director of United States Mint.
United States Geological Survey, Reports.
Estadistica Minera; Sociedad Nacional de Mineria, Chile.
Boletin del Cuerpo de Ingenieros de Minas del Peru.
Annales des Mines Belgique.
"Mines and Quarries," Home Office Reports.
"Census of Production," United Kingdom, Board of Trade.
Annual Trade of the United Kingdom; Board of Customs and Excise.
"Statistical Abstracts," United Kingdom.
Annual Reports, Deputy Master of the Mint, London.
Rivista del Servizio Minerairo.
Norges Bergreiksdrift Statistike Centralbureau.
Russian Year Book.
Revista Minera de España.
Indian Year Book.
Twelfth Census of the United States.
Year Book of the Commonwealth of Australia.
Glückauf (annually).
Year Book of the Union of South Africa.
Annual Reports, Department of Mines, New South Wales.
" Statement, Minister of Mines, Wellington.
" Reports, Secretary of Mines, Queensland.
Reports of Secretary for Mines, Tasmania.
Annual Reports, Secretary of Mines, Victoria.
" " Department of Mines, Western Australia.
"Statistical Abstracts," Foreign Countries.
China Year Book.

TABLE I.

World's Production of Refined Silver. (Troy Ounces.)

	1902.	1903.	1904.	1905.	1906.	1907.	1908.	1909.	1910.	1911.	1912.	1913.
Canada	—	—	—	—	—	643,000	11,168,689	14,242,545	16,373,799	19,078,768	17,572,217	13,789,709
Mexico	28,935,000	27,649,000	20,897,500	23,791,000	26,363,000	25,720,000	31,507,000	32,429,705	33,937,540	34,181,880	37,268,280	—
United States	102,397,750	98,057,500	97,504,520	94,691,395	99,330,640	114,296,465	117,548,020	126,603,505	124,648,847	130,091,787	130,416,909	117,510,190
Total N. America	—	—	—	—	—	140,659,465	160,223,709	173,275,755	174,960,186	183,352,435	185,257,406	—
Total Central and S. America	6,430,000	6,430,000	6,430,000	6,430,000	6,430,000	6,430,000	6,430,000	6,430,000	6,430,000	6,430,000	6,430,000	—
Austria	1,272,979	1,279,313	1,254,364	1,235,975	1,251,599	1,244,976	1,279,087	854,740	1,586,313	1,567,556	1,586,763	—
Belgium	6,845,442	7,482,591	8,131,378	6,492,210	5,579,150	5,723,343	7,330,200	8,721,330	8,508,658	8,124,948	9,000,714	8,164,171
France	2,482,300	1,929,000	1,832,550	1,826,334	1,609,364	1,826,334	1,967,065	2,047,022	1,929,000	1,703,950	1,511,050	—
Germany	14,844,111	12,739,533	12,532,938	12,855,948	12,649,127	12,439,864	13,111,862	12,878,100	13,503,032	15,303,400	17,293,485	—
Great Britain	—	—	—	—	20,685,000	21,451,000	20,923,000	19,078,000	24,631,000	25,968,000	23,626,000	23,111,000
Hungary	718,970	554,202	625,575	512,053	520,026	379,016	331,852	362,812	437,207	400,024	346,641	—
Italy	949,132	784,074	801,917	649,912	624,638	656,245	686,984	637,084	457,720	390,397	461,770	420,972
Norway	134,709	165,637	259,258	228,265	204,796	215,405	240,261	250,127	231,480	245,465	270,060	302,210
Russia	300,152	160,750	173,610	204,614	216,408	265,630	269,312	131,815	140,624	163,965	160,750	—
Spain	3,117,746	3,632,243	3,774,989	3,973,965	4,064,532	4,097,035	4,175,674	4,610,406	4,152,398	3,539,136	4,610,310	4,018,750
Turkey	48,000	48,000	48,000	48,000	48,000	48,000	48,000	48,000	48,000	48,000	48,225	—
Total Europe	—	—	—	—	—	48,346,848	50,363,197	49,619,436	55,625,432	57,454,841	59,315,768	—
British India	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil
Japan	1,851,840	1,883,990	1,990,085	2,411,250	3,247,150	2,932,080	3,115,335	3,215,000	4,616,740	4,385,260	4,787,135	—
Total Asia	1,851,840	1,883,990	1,990,085	2,411,250	3,247,150	2,932,080	3,115,335	3,215,000	4,616,740	4,385,260	4,787,135	—
New S. Wales	6,416,650	6,489,689	7,751,667	6,804,934	5,575,410	5,921,457	6,484,288	3,717,016	5,196,323	5,731,468	5,220,538	5,908,638
New Zealand	673,986	905,374	1,091,267	1,179,903	1,390,536	1,562,603	1,731,336	1,813,831	1,711,235	1,310,943	779,261	975,616
Queensland	701,312	642,125	654,929	601,712	783,087	921,497	1,162,276	1,001,383	861,202	549,015	569,181	604,979
Victoria	47,682	40,532	59,908	45,007	44,781	38,222	29,363	29,961	27,879	26,719	25,188	23,269
W. Australia	83,293	168,113	399,190	359,744	282,145	189,265	168,455	132,203	176,139	162,599	150,065	152,751
Total Australasia	7,922,923	8,245,833	9,936,961	8,991,300	8,075,959	8,633,044	9,575,718	6,694,394	7,972,778	7,780,744	6,744,233	7,665,253
TOTAL WORLD	—	—	—	—	—	207,001,437	229,707,959	239,234,585	249,605,136	259,403,280	262,534,542	—

F.—CONCLUSIONS AFFECTING FUTURE SUPPLIES.

In the year 1860 the world's production of silver is reported to have been about 30,000,000 ounces. With some small fluctuations it steadily increased from that date until 1912. In 1870 it had grown to approximately 43,000,000 ounces, in 1880 to 75,000,000, in 1890 to 126,000,000, in 1900 to 173,000,000, in 1910 to 219,000,000, and in 1912 to 233,000,000—an increase of nearly 800 per cent. in roughly half a century. From 1912 a decline set in, the production being 232,000,000 ounces in 1913, 176,000,000 in 1914, 186,000,000 in 1915, 175,000,000 in 1916 and 1917, and for 1918 it has been variously estimated at from 160,000,000 to 180,000,000.

A curve indicating the course of production since 1860 is shown in diagram 10, which has been reproduced from the "General Report on Gold and Silver in 1917" published by the United States Geological Survey. The annual totals in this diagram are those quoted by the Director of the United States Mint; they do not precisely coincide with those calculated independently for this Report.

In 1912 a continuance of the upward trend, which had been maintained for more than 50 years, was to be expected. Its cessation and subsequent conversion into a precipitous downward trend are assignable to two possible causes—either a sudden failure in the world's silver resources, or a sudden interruption in the winning of silver from them. It needs but little consideration to show that the change was due entirely to the latter cause.

The decline after 1912, at first slight but later more serious, caused the peak-average production of 229,000,000 ounces for the years 1910-13 to drop to a trough-average of about 178,000,000 for 1914–17—a fall of 51,000,000 ounces. As between these two periods, there was a decline in the average Canadian production of 7,000,000 ounces, in that of Mexico of no less than 44,000,000, in that of Australia of 7,000,000, and in that of Europe of 3,000,000 —a total decline of 61,000,000 ounces. On the other hand there was an increase in the United States production of 9,000,000 ounces and in that of Asia of 1,000,000—a total increase of 10,000,000 ounces, leaving the adverse balance already referred to of 51,000,000 ounces.

The Canadian decline was due to the progressive exhaustion of the ores of the Cobalt field; but that of Mexico was attributable to the disturbing effects of the Mexican Revolution, while the Australian and European declines were a consequence of industrial dislocation by the European War. The increase in the production of the United States and Asia, though in some measure referable to war stimulation, was due in part at least to normal ore development, and may be regarded as compensating for the ore depletion in Canada. It appears therefore that the sudden fall in production from the 229,000,000 level of 1910–13 to the 178,000,000 level of 1914–17 must be ascribed to political causes, viz., to the Mexican Revolution in the main and to the European War in a minor degree, and not to failure in the world's reserves of silver-bearing ores—any exhaustion of these in one region having been counterbalanced by the discovery and development of new supplies elsewhere. Moreover, there can be no doubt that when normal industrial conditions are restored in the regions of curtailed production, a silver output at least as great as any yet attained may be reasonably anticipated. On the other hand, if conditions affecting industry in general and the mining and metallurgical industries in particular do not become favourable in these regions, a long period must elapse before the world's output can return to the previous high-water level, and still longer before the advance beyond that level, interrupted since 1912, can be resumed.

It is probable that with the European War ended, the output from Europe and Australia will shortly become normal; but so long as conditions remain unsettled in Mexico supplies from that country will continue to be small. This is particularly serious because of the large dimensions of the normal Mexican output, and of the magnitude of the present shortage below that output. By 1911, when the existing disorders were initiated, the steadily growing Mexican production had reached a maximum of nearly 80,000,000 ounces—a larger annual output than has ever been recorded by any other country. In 1916 the production, standing at 23,000,000 ounces, was 57,000,000 ounces lower; and for the 4-year period 1914–17, as already stated, it averaged 44,000,000 ounces less than for the period 1910–13.

The cutting off from the world of supplies on this scale could not fail to have serious consequences, and the present difficulties in regard to silver production and to the silver situation generally, are in large measure the outcome of the Mexican disturbances of the last eight years. With a demand for silver more urgent than any previously experienced, the restoring of the mines and mills of Mexico to unhampered production has become a matter of international importance.

The opinion has been expressed, that given a return to normal political and industrial conditions in regions where silver mining has of late been adversely affected, a silver production as great as any yet attained may be regarded as assured. But there are considerations which point to the further conclusion that under favourable conditions the production of the future will exceed the highest yet recorded. These considerations which have reference to the price of silver, the extent to which the production of other metals is likely to affect the output of this metal, the effect of improvements in mining and metallurgical practice, and the possibilities of new sources of silver, will now be dealt with.

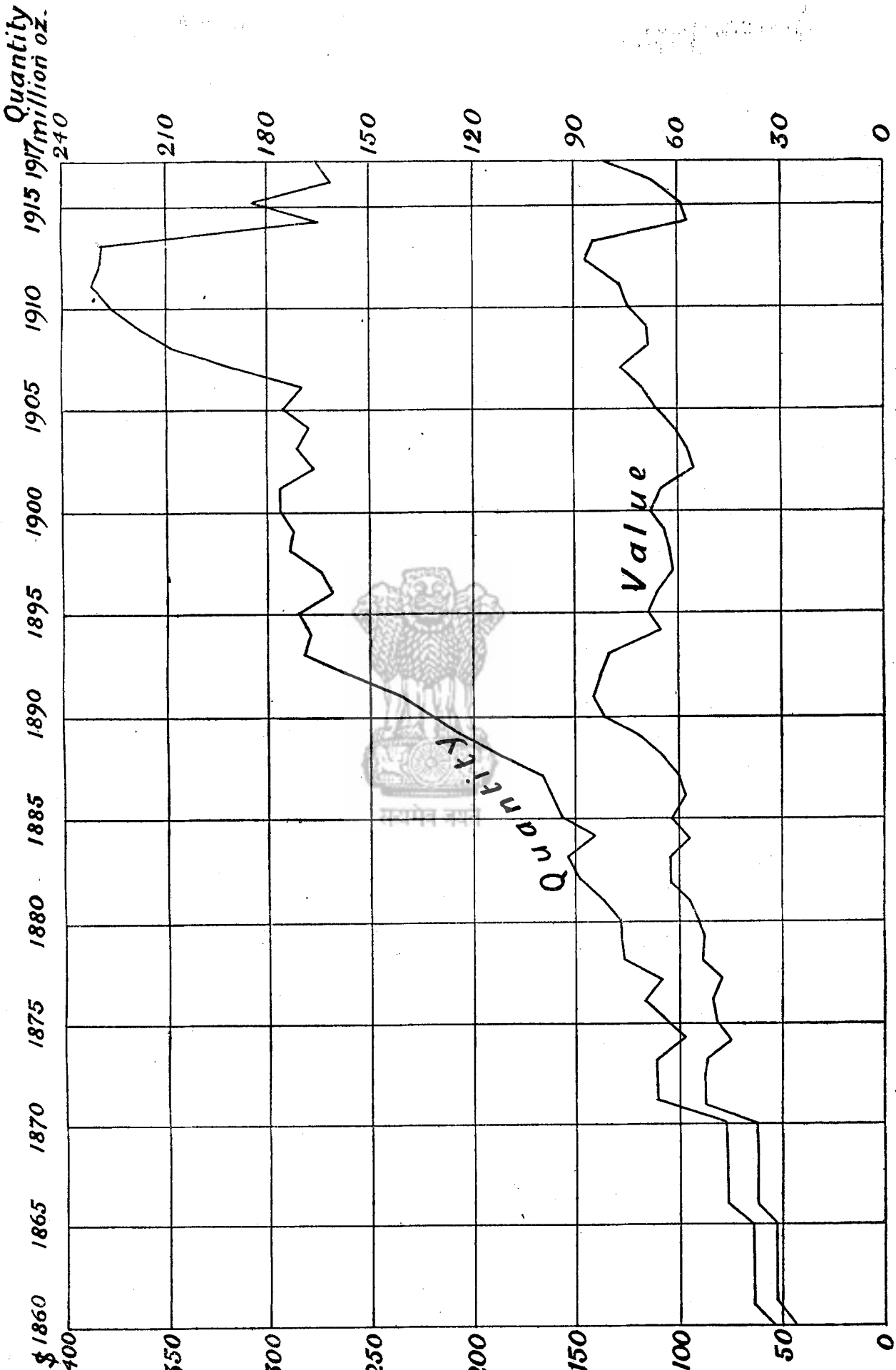


DIAGRAM 10.—WORLD'S PRODUCTION of SILVER (QUANTITY and VALUE), 1860–1917.

According to the figures submitted in this report the total output of silver from 1913 to 1918 has been 275,000,000 ounces less than it would have been if production had continued at the 1912 level. This shortage has created a strong demand for silver, a demand which has been accentuated by the withdrawal of gold from circulation, the issue of large amounts of paper currency, and the increased consumption of silver in the arts. The demand thus created has caused the price of the metal to advance until to-day it stands higher than ever before, and is nearly 270 per cent. above the average price for 1915.

As has already been pointed out, during the last 50 years the production of metallic silver has increased enormously, this increase being rendered possible not only by the development of existing ore fields, but by the discovery and working of new ones. The upward trend in the production has been accompanied by a downward trend in price, which can best be illustrated by the following figures:—

Year.	Average Price per oz. of Standard Silver in the London Market.
	d.
1870	$60\frac{1}{2}$
1880	$52\frac{1}{4}$
1890	$47\frac{3}{4}$
1900	$28\frac{1}{4}$
1910	$24\frac{11}{16}$
1915	$23\frac{11}{16}$

During this period the most rapid fall occurred in the decade 1890–1900. Between 1897 and 1915 the average price per standard ounce in the London market varied between $23\frac{11}{16}d.$ and $30\frac{7}{8}d.$, or in round figures between 2*s.* and 2*s.* 7*d.* It will be seen, therefore, that during this period a very marked increase in production was accompanied by only slight variations in market price. Since 1915, the augmented demand for silver, coupled with increasing shortage has resulted in an appreciation of the price which during the last few months has become phenomenally high, until to-day the figure stands at about 64*d.* per standard ounce and silver coins have almost ceased to be tokens.

Authorities are of the opinion that a high silver price will prevail for a prolonged period. In 1918 the United States Congress passed the Pittman Bill, which established a maximum price of $1.01\frac{1}{3}$ dollars per ounce of silver. Senator Pittman recently stated that the demand for silver is now double the production and expressed the view that for the next 20 years prices would range between one dollar per ounce, the figure at which the United States Treasury is committed to make purchases to replace the melted Sherman dollars, and 1.29 dollars per ounce, the established parity of the silver dollar. In view of the dominating position in silver production occupied by the United States it seems safe to predict that this Act will be a decisive factor in stabilising the price of the metal for some years to come at not less than one dollar per ounce.

According to a recent article by Mr. S. N. Soupkoff, contributed to the *Salt Lake Herald*, quoted in the *Mining Journal* of July 12th, the yearly demand for silver is as follows:—

Subsidiary coinage	60	million ounces.
Arts	75	„ „
India	150	„ „
China	40	„ „
Africa	25	„ „
Total	350	„ „
Production	180	„ „
Shortage	170	„ „

This estimate of demand and production agrees with the previously expressed view of Senator Pittman, that the former is about double the latter. If it is anything like correct, it seems almost certain that a high market price for silver will be maintained for a long time. This would have an important effect upon silver mining, and could not fail to stimulate production, for the margin of profit between extraction costs and selling price is considerable even in camps where such costs are high. In a letter to us written last July, an engineer who has recently returned here from America, states that:—"At Cobalt the cost of production "of silver to-day is about 70 cents per ounce (about 2*s.* 11*d.*). At Pachuca, Mexico, it is less "than 30 cents (about 1*s.* 3*d.*)." It seems very probable, therefore, that "dollar" silver will have a most stimulating effect on the mining of this metal, particularly in those countries like Mexico, Peru, Bolivia, and Chile, where extraction costs are low. We learn from the same source that provided Mexico enters upon a period of political stability there is almost certain to be a steady increase in the output of silver.

The following quotation from Mr. Soupkoff's article appears worthy of reproduction:—"In conclusion, it can be safely stated that the future of silver is exceedingly bright.

" Ex-Senator Guggenheim in a recent report to the shareholders of the American Smelting " and Refining Company said 'Authorities on the market agree that the price of this metal " will be maintained at one dollar for a long period.' Senator Reed Smoot, the future " Chairman of the Senate Finance Committee, said recently at a meeting of Mining " Engineers, 'Remove the restrictions on the price of silver and it will have a mighty good " rise in value,' a prediction which has already been verified. Professor Fisher, of Yale, " was recently quoted as saying, 'Gold will not return to circulation. There will be no great " outflow of gold through international trade.' If he be right in his prophecies, then part " of all our foreign debts and interest due from European nations accruing on our foreign " loan, if settled by real metallic money, should be in a large sense settled by the use of " silver. To summarise the actual outlook for the future of silver, one can say that, with a " diminishing output and increased demand, the market for this metal will be particularly " good for some years."

It will be seen, therefore, that American authorities are agreed that the price of silver will remain high for many years. Given stable political and industrial conditions, an increased production of the metal may confidently be looked for.

The production of silver has been shown to be intimately connected with that of four other metals, viz., gold, copper, lead and zinc; so much so, that, broadly speaking, 80 per cent. of the world's silver is obtained from ores which are mined primarily for these metals. In endeavouring to judge of its future production, therefore, the likelihood of the demand for them must be given due consideration.

So far as gold is concerned, there is no reason for supposing that the demand for this metal will diminish. On the contrary, it seems probable that it will be well maintained. The question, however, has to be considered in relation to the cost of production and the selling price of the metal, which, until recently, had been fixed at 77*s.* 9*d.* per standard ounce. In spite of improvements in mining and metallurgical practice, it is known that the cost of producing an ounce of gold in the Transvaal on the Witwatersrand, the leading goldfield of the world, has been increasing of late years owing to a fall in the grade of the ore and a rise in prices which involves an increase in the cost of labour and supplies. According to the reports of the Transvaal Chamber of Mines, the working cost per ounce of gold produced increased from 49*s.* 6*d.* in 1908 to 54*s.* 4*d.* in 1913. As is well known, the cost of production has been augmented very greatly during the war, so much so that several mines have ceased operations. How far these rises are likely to prove permanent it is impossible to say. If, however, the pre-war results can be taken as an index of the industry of gold production generally, it is clear that prices must rise much more, that is to say, that the value of gold must depreciate considerably further before any perceptible check is given to the output from this cause. There was a slight falling off of the output of this field recently, but this appears to be due entirely to the partial exhaustion in some existing mines. The recent decision of the Government to permit a free market for gold has had an important effect on its price, and at the present time it is realising about 100*s.* per ounce in the open market. If this appreciation is anything like maintained it will have an important effect in stimulating gold mining, and will doubtless result in the opening up of mines which it did not pay to work under the former fixed selling price. An increased production of silver under this head may therefore be looked for.

The metals lead, copper, and zinc may be conveniently considered together. After iron they are the most important industrial metals known. There is a continuous, extensive and increasing demand for them in modern civilisation. Rather curiously the annual pre-war production of each was very nearly the same, viz., about 1,000,000 tons. During the War there has been a tremendous stimulus to this production which has exceeded all previous figures, particularly as regards copper and zinc, as a result of which increased supplies of silver have been forthcoming. Since the Armistice this output has diminished considerably owing to accumulated stocks. When the reconstruction of areas devastated in the War has once been undertaken, there will be a considerable call for for these metals. In addition there will be a large demand for them in connection with repairs, arrears of work, &c., which have not been undertaken during the War. Even after these deficiencies and replacements have been made good the normal needs of a world at peace will undoubtedly call for an augmented production owing to the increasing extent to which these metals are being used in modern life. As to the magnitude of these increases it is very difficult to make any forecast other than of a quite general character. Having regard to the trend of pre-war production, it looks as though the greatest increase is likely to take place in the case of copper, and the least in the case of lead.

The demands for copper and its alloys are of the most varied kinds. In spite of the introduction and use of aluminium in electrical work, copper still retains its pre-eminence as the most extensively used metal in this industry, which is still undergoing considerable development, and it seems probable, therefore, that for some time to come an augmented output of copper will be forthcoming. This will, of course, have as its consequence an increased production of silver. The output of lead before the War did not show as rapid an annual rise as that of copper or zinc. At the same time there was a steady and decided upward trend in production, and it is justifiable to conclude that this will be at least maintained if not augmented. Some increase in silver output under this head is therefore to be looked for.

Zinc is the least important of the three metals as a source of silver, and indeed it is principally in the form of mixed ores such as those of Broken Hill, where it is associated with lead, that it constitutes a source of this metal. In recent years, however, the electrolytic production of zinc has become not only a commercial possibility, but also a fact and developments are taking place on a considerable scale. That these will continue in centres where fuel is scarce and water power plentiful can hardly be doubted. If such is the case it will be of decided benefit to the silver industry because *the whole* of this metal should be recovered in the process instead of only part of it as in the distillation process. It is to be anticipated therefore that zinc ores carrying silver values are likely to constitute a more important source of silver in the future than they have yet done.

The market prices of zinc and copper appreciated considerably during the war; that of lead was much less affected. After the signing of the armistice the price of copper fell considerably, but has since risen, while that of zinc also dropped appreciably, and has again risen but to a less degree. The price of lead has remained fairly constant.

The extent to which the output of silver is likely to be influenced by the variations in the prices of these associated metals is a matter which may be dealt with on the following general lines. During the last 50 years the price of copper has been very variable. Considerable fluctuations in the market price have occurred, at least one of which was due to an attempt to corner the metal. English Standard Copper has been quoted as high as 87*l.* per ton and as low as 40*l.* per ton during this period, but there has been no decided trend towards a cheapening of the metal. Lead has changed hands at 23*l.* per ton and also at 9*l.* 11*s.* 6*d.* per ton during the same period, while zinc has fluctuated between 27*l.* and 14*l.* per ton. In neither case has the tendency been towards a lowering of the price, but if anything in the opposite direction.* In all three cases there has been, apart from occasional set-backs, a very large increase in production. Against this, while the output of silver has been greatly augmented during the same period, the price has almost continuously fallen—sometimes slowly, and at other times rapidly, with the result that whereas in 1870 it was 60$\frac{1}{2}$*d.* per ounce of standard metal, in 1914 it had fallen to 25$\frac{5}{16}$*d.* The explanation of this difference between the trend of ruling prices of silver on the one hand and the base metals on the other is no doubt due to the fact that supplies of the precious metal were always and to an increasing extent ahead of the demand, while in the case of copper, zinc, and lead, sometimes the supplies exceeded the demand, at others the demand exceeded the supply. On the whole it would appear that during the period 1863–1913 the output of silver was not adversely affected by fluctuations in the prices of its associated base metals.

Another consideration to be borne in mind in connection with the probable output of the foregoing metals is the fact that, owing to improvements in extraction methods, ores of lower and lower grade are gradually being brought within the range of commercial treatment. This contention can best be illustrated by considering certain examples.

Previous to the introduction of the cyanide process, it did not pay to extract gold from any sulphide ores unless they contained at least 0·5 of an ounce of this metal. By means of this process, however, the limit of such payable ores has now been brought down to about 1 dwt. per ton. Indeed, in the case of clean gravel containing native gold, and not requiring crushing, the limit has been brought as low as 3 grains, *i.e.*, $\frac{1}{160}$th of an ounce.

Similarly, in the case of silver sulphide ores the limit of 20 ounces per ton has been lowered to from 2 to 3 ounces per ton by the cyanide process. [It is to be anticipated that by the introduction of "flotation" methods in conjunction with cyanidation this limit will be substantially lowered.]

In the case of copper the limiting percentage up to the year 1890 was about 5 per cent. By the introduction of leaching processes this figure was reduced to from 2 to 3 per cent. in 1894. Progress has been continuous in lowering the limit, and to-day tailings from concentration tables containing only 0·5 per cent. of copper are being treated for extraction at Cananea (Mexico) and Anaconda (Montana), U.S.A. Recently the flotation process has been applied to low grade ores and millions of tons are being treated annually.

As regards lead, up to 1905 the limit of commercially payable ores was about 11 per cent. of the metal. By means of pot-roasting and improvements in the handling of the ore, this has been brought down to about 5 per cent. at the present time.

The effect of such improvements in the technique of ore treatment and metal extraction is to compensate for the gradual exhaustion of high grade ores by bringing within the scope of commercial operations an increasing reserve of lower grade ores, and to stabilise the industry by ensuring future supplies of raw material. The high price of silver which seems likely to continue, will have an important influence on the future of low grade ores of metals associated with it by raising their value to that extent and thus stimulating their exploitation.

A final consideration has reference to possible new sources of silver. In the past as the resources of one district have become exhausted, supplies more than compensating have invariably been discovered elsewhere, with the result that output expansion has been continuous—at any rate it was until 1912 when it was interrupted by purely political causes. There is no good reason for supposing that discovery and expansion have come to an end; on the contrary, in view of the continuous growth of output from 1860 to 1912, and seeing that the rate of growth was greater in the closing years of that period than ever before, it is

* *See* diagram on p. 241.

probable that when the abnormal conditions of the last few years have passed away, expansion, at least at the average 1860—1912 rate, will be resumed.

Many of the important silver fields have been discovered in comparatively or quite recent years. Comstock was opened up in 1859 and was at its zenith about 1877; Tonopah and Cobalt became famous after 1903. Among the silver-yielding base metal fields, Broken Hill was discovered in 1883, Leadville, Eureka, Butte, and Cœur d'Alene about the same time, and Bawdwin in 1904. The accentuated silver output, which began to be marked about 1870 and continued until 1912, was due to the swelling of production by these several fields, and especially to increased recovery from the base-metal fields; and it was probably to the plentiful silver thus liberated that the prolonged fall in price between 1871 and 1915 was due, supplies keeping persistently ahead of demand.

Since silver fields have been discovered so recently, it would be rash to postulate that no further discoveries remain to be made. In this connection it may be said that in the Cordilleran region extending from Alaska almost to Patagonia—which includes the Yukon, British Columbia, the Western States, Mexico, Colombia, Ecuador, Peru, Bolivia, and Chile, and which for many years has yielded more than 80 per cent. of the world's silver—the geology is particularly favourable for mineralization, and it is practically certain that important new deposits await discovery in this great mineral belt. There are also large unprospected tracts in Africa, Asia, and Australia in which silver-bearing ores may yet be found.

With regard to actual discoveries reference has already been made to the recent location of silver ores in the Alice Arm and Bear River districts of British Columbia. It is too early to judge as to the importance of this find, but at least a considerable yield of silver from the new field seems to be assured.

Reference has also been made to the fact that in districts where true silver ores are being worked or have been worked in the past, large quantities of low-grade silver ore have been left unmined, either because of the failure to introduce modern methods in mining, milling and ore dressing, or as a consequence of the fall in the price of silver. The improved silver market gives such deposits new possibilities. In some cases even the tailings of the old rich silver mines have become capable of profitable exploitation. Reports from the silver camps of Cobalt and Tonopah, and from the old silver fields of the Western States, of Mexico, and of South America, state that the improved prospects are fully realized and that steps are being taken for the more active working of existing mines and for the opening up of others that have long been out of operation.

The improvement in the price of gold as well as of silver will also favour the more vigorous mining of gold-silver and gold ores. There can be no doubt that many deposits of low-grade dry or siliceous ores, which for the last 25 years have been outside the economic limit, will now come within it and will eventually contribute to an increased silver production.

It must not be supposed, however, that this increased production from low-grade precious metal ores will be immediate. The opening up of new deposits, the re-starting of old mines or the greater development of existing ones, cannot be quickly accomplished, and some time must elapse before the stage of production is reached.

With regard to the base metal ores, which it must be remembered now supply at least two-thirds of the world's silver, there are numerous possibilities of important developments in many parts of the world where great low-grade bodies of copper, lead, or zinc ores, and especially of complex ores of these metals, are already known. Hitherto, the exploitation of all but the most favourable of these has been delayed for various reasons but principally because processes for their beneficiation have not been perfected. The maturing and successful application, within the last few years, of methods such as flotation and electro-magnetic separation, and of hydro-metallurgical, electro-metallurgical, and chemical processes of ore treatment have already permitted the utilisation of some of these, and one of the features in the evolution of mineral industries during the coming decades will be the extensive mining, by large-scale engineering methods, of the widely distributed deposits of this type.

The mere mention of the deposits of Chuquicamata, Braden, and Potrerillos in Chile, of Cerro Verde and Tintaya in Peru, of Katanga and Rhodesian Broken Hill in Africa, and of the Altai and Bawdwin in Asia, will suffice to furnish examples of great deposits of this kind which are now being actively explored or are already in the initial stages of production. All of these low-grade or complex bodies carry precious metals in larger or smaller amount, and the ultimate recovery from them of large quantities of copper, lead, and zinc will result in the production of considerable quantities of silver and gold also, over and above that now being obtained from base metal ores in the older established mining districts.

Here again, however, increased production of silver will not be immediate. On the contrary, at the present moment the mining of base metal ores is being checked, while the large excess accumulations of copper, lead, and zinc, produced during the war, are being absorbed, and for a time the mine production of these, and of their contained silver, will be on a somewhat reduced scale.

It is probable, therefore, that in the immediate future silver supplies will show no substantial increase; they may even diminish slightly. But eventually, and at no distant

date, when the stimulated mining of new bodies of precious metal ores, as a consequence of the improvement of precious metal prices, has reached the stage of production, and when the temporary set-back to the mining of base metal ores has come to an end, the output of silver should begin to show a marked advance.

The extent of that advance it is impossible to predict; but it is probably safe to say that so long as the Mexican output continues at its present low level, the world's total is hardly likely to exceed the maximum attained in 1912. On the other hand, should the Mexican output be revived, then a considerable advance upon that maximum might be anticipated with some confidence.

The broad conclusions deduced from the foregoing evidence and considerations may be summarised as follows:—

(1) During the years 1906–1912 the world's production of silver showed a marked increase, which was merely an accentuated continuation of an increase dating back at least to 1860. This increase was abruptly checked in 1913. In 1914 the production suddenly fell by nearly 60,000,000 ounces, and it has remained depressed ever since.

(2) The falling off in the output of the last five years is to be attributed entirely to the Mexican Revolution and the European War. It is not due to any general exhaustion of ore supplies, such slight exhaustion as has occurred in certain localities having been more than made good by the development of new supplies in others. If these political upheavals had not intervened the annual output would, it is believed, have been at least as great as any yet realised. Further, it is anticipated that when favourable industrial conditions are established in Mexico and other disturbed silver-mining centres, production will return to the 1912 level, and will probably continue to expand.

(3) Important silver fields have been discovered intermittently since early times; several have been made known during the present century. The discovery of others in the future, especially since great advances have been made of late years in the science and art of prospecting, may be confidently anticipated.

(4) Within recent years silver has been obtained in growing measure as a by-product from mines worked primarily for gold, copper, lead, and zinc. Ores of these four metals are estimated to yield at present about 80 per cent. of the world's silver, and of the last three about 70 per cent. Prices now ruling for all of them are good, and may remain so for a considerable time; further, the future demand for these metals is likely to be not only maintained, but increased. The resulting augmented production of them will necessarily be accompanied by an augmented production of the silver associated with them.

(5) While this enquiry has shown that there is a very direct dependence between the *output* of silver and the *output* of the associated base metals, copper, lead, and zinc, it has failed to reveal any obvious relation between the *output* of silver and the *prices* of those metals. It would appear that the factors which influence the demand for industrial metals are largely independent of those affecting the demand for precious metals.

(6) Modern improvements in the technique of mining and metallurgy have led to the profitable exploitation of successively lower grades of ores of silver, gold, copper, lead, and zinc. This process of extended beneficiation, by bringing within the scope of profitable treatment silver-bearing ores previously outside it, has largely increased, and will continue to increase, the available reserves of such ores.

(7) The total output of silver between the end of 1912 and the beginning of 1919 has been fully 275,000,000 ounces less than it would have been if production had been maintained at the 1912 level. This shortage, in conjunction with other factors, has created an urgent demand for silver, which has caused the price to rise beyond all previous records. The price will probably remain high, possibly between 4*s.* and 5*s.* 6*d.* per standard ounce, for a prolonged period.

(8) The increased production, which in any case would have eventually resulted from the growing exploitation of base metal ores and from betterments in methods of mining, ore-dressing, and extraction, will be accelerated by this improved price of silver. By raising the value of the contents of both precious metal and base metal silver-bearing ores, it will permit of the utilisation, even by existing methods, of large quantities of low-grade ores previously of too small value for economic treatment. In this way a continued good market for silver will have the effect of stimulating production.

(9) It must, however, be borne in mind that any extension in the mining of precious metal ores will take time, and also that the mining of base metal ores is for the moment below normal and will continue to be, so long as the surplus supplies of copper, lead, and zinc produced during the war remain unabsorbed. It is probable therefore that silver production will remain for a time at a low level; but in the near future, when increased precious metal mining has reached the stage of production and when the temporary check to base metal mining has been removed, a steady increase in the output of silver will set in.

(10) It is not possible to predict the extent of that increase, but so long as the Mexican output remains at its present reduced level, the world's production of silver is not likely to rise beyond the maximum attained in 1912. On the other hand, if normal conditions should be restored in Mexico, a production considerably in advance of that maximum would eventually, and probably shortly, be realised.

(11) The protracted fall in the price of silver, which set in in 1871 and reached a low record in 1909 and 1915, was due to excess production, several important silver fields having been developed, and the large-scale recovery of silver from base metal ores having come into operation during that period. Reduced production, increased consumption, and accumulated arrears consequent upon the War, will probably keep the supplies of silver short and the price of silver high for many years; but eventually history is likely to repeat itself, and, with an expanded output from precious metal mines, and plentiful supplies from base metal mines, production may again get ahead of consumption, in which case price reduction will ensue.

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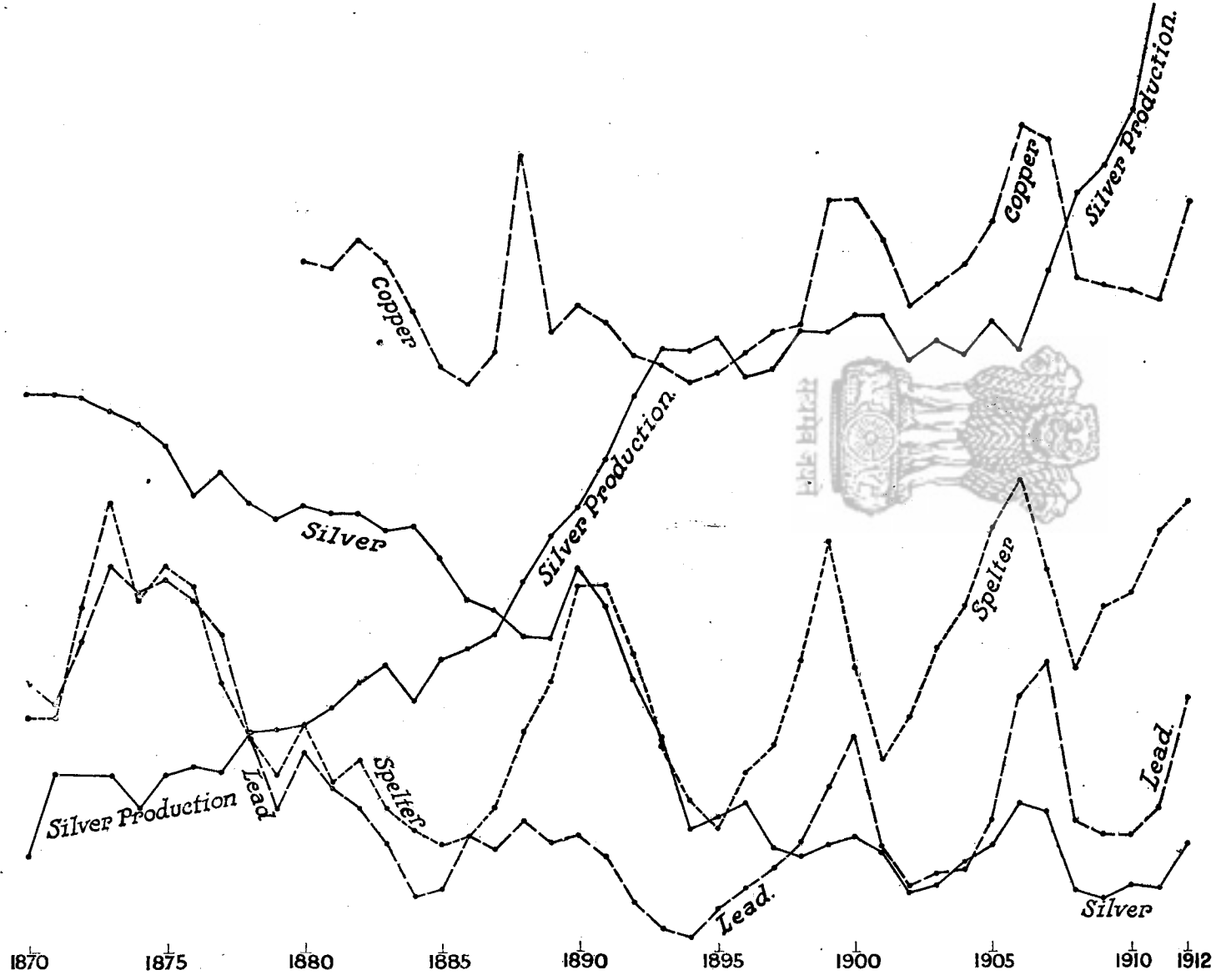
30th September 1919.

DIAGRAM REFERRED TO IN QUESTION 4,661. (*See* VOLUME OF EVIDENCE, p. 262).



PRICE VARIATIONS of LEAD, SPELTER, COPPER, and SILVER, and SILVER PRODUCTION.

The prices of Lead, Copper, and Spelter are plotted in £s per ton of 2,240 lbs.

The price of Silver is plotted in pence for standard ounces.

The production of Silver is plotted in units of 10,000,000 troy ounces.

PRICES	1870	1912
Lead	£18 13*s.*	£18 4*s.*
Spelter	£18 10*s.*	£26 3*s.*
Silver	60½*d.*	28*d.*

	1880	1912
Copper	£62	£73

APPENDIX XXXI.

(a) Amount, Composition, and Location of the Gold Standard Reserve 1913–14 to 1919–20.

Date.	England.				India.				Total England and India.
	Securities at Market Value.	Cash at Short Notice.	Gold Deposits at the Bank of England.	Total.	Loans and Book Credits.	Gold.	Silver.	Total.	
	1.	2.	3.	4.	5.	6.	7.	8.	9.
1913–14.	£	£	£	£	£	£	£	£	£
30th June	15,941,086	1,015,290	1,730,000	18,686,376	—	—	4,000,000	4,000,000	22,686,376
30th Sept.	15,918,831	1,064,189	1,840,000	18,823,020	35,327	—	4,000,000	4,035,327	22,858,347
31st Dec.	15,891,606	1,015,227	2,695,000	19,601,833	—	1,475,000	3,339,749	4,814,749	24,416,582
31st Mar.	17,165,069	24,962	4,320,000	21,510,031	22,199	—	4,000,000	4,022,199	(*d*)25,532,230
1914–15.									
30th June	17,073,158	111,595	4,420,000	21,604,753	22,199	—	4,000,000	4,022,199	25,626,952
30th Sept.	14,013,808	108,169	3,700,000	17,821,977	25,110	7,909,000	—	7,934,110	25,756,087
31st Dec.	12,683,863	—456	1,250,000	13,933,407	(*a*)8,025,110	3,898,000	—	11,923,110	25,856,517
31st Mar.	12,148,746	8,322	1,250,000	13,407,068	(*b*)7,069,957	5,238,184	—	12,308,141	(*e*)25,715,209
1915–16.									
30th June	12,082,579	45,695	1,350,000	13,478,274	(*b*)7,000,000	5,241,389	—	12,241,389	25,719,663
30th Sept.	12,962,681	55,198	1,350,000	14,367,879	(*b*)7,000,000	4,533,142	—	11,533,142	25,901,021
31st Dec.	12,597,632	4,875,285	1,350,000	18,822,917	(*b*)7,000,000	142	—	7,000,142	25,823,059
31st Mar.	16,218,692	5,792,631	—	22,011,323	(*c*)4,001,326	238,734	—	4,240,060	26,251,383
1916–17.									
30th June	16,418,748	6,281,133	—	22,699,881	(*c*)4,000,000	65,060	—	4,065,060	26,764,941
30th Sept.	16,468,576	4,265,208 *2,000,000 6,045,440	—	22,733,784	(*c*)4,000,000	1,045,060	—	5,045,060	27,778,844
31st Dec.	17,032,541	*2,000,000	—	25,077,981	(*c*)4,000,000	168,778	—	4,168,778	29,246,759
31st Mar.	25,405,570	6,001,456	—	31,407,026	181,432	103,000	—	284,432	(*f*)31,691,458
1917–18.									
30th June	26,496,389	6,024,360	—	32,520,749	—	47,000	—	47,000	32,567,749
30th Sept.	27,431,499	6,062,154	—	33,493,653	—	15,000	—	15,000	33,508,653
31st Dec.	27,765,603	6,000,075	—	33,765,678	—	—	—	—	33,765,678
31st Mar.	28,452,943	6,000,499	—	34,453,442	—	—	—	—	34,453,442
1918–19.									
30th June	28,691,745	6,000,075	—	34,691,820	—	—	—	—	34,691,820
30th Sept.	29,307,985	6,001,209	—	35,309,194	—	—	—	—	35,309,194
31st Dec.	29,594,558	6,000,637	—	35,595,195	—	—	—	—	35,595,195
31st Mar.	29,729,505	6,015,672	—	35,745,177	—	—	—	—	35,745,177
1919–20.									
30th June	30,220,878	6,014,842	—	36,235,720	—	—	—	—	36,235,720
30th Sept.	36,444,219	188	—	36,444,407	—	—	—	—	36,444,407

* Temporary loan to the Home Treasury.

(*a*) Including 8,000,000*l.* temporary loan to the Government of India.

(*b*) Including 7,000,000*l.* temporary loan to the Government of India.

(*c*) Including 4,000,000*l.* temporary loan to the Government of India.

(*d*) Differs from the figure published in the monthly return by 22,198*l.* owing to alterations in the accounts after the end of the financial year.

(*e*) Differs from the figure published in the monthly return by 70,129*l.* owing to alterations in the accounts after the end of the financial year.

(*f*) Differs from the figure published in the monthly return by 181,432*l.* owing to alterations in the accounts after the end of the financial year.

(b) Monthly Absorption of Rupees and Notes during 1917–18 and 1918–19 (in Lakhs of Rupees). (The Figures include the Balances held in District Treasuries.)

	1917–18.			1918–19.		
	Rupees.	Notes.	Total.	Rupees.	Notes.	Total.
April - -	+590	+10	+600	+579	+405	+984
May - -	+227	+233	+460	+547	+863	+14,10
June - -	−316	+380	+64	+291	+249	+540
July - -	−469	+267	−202	+152	+698	+850
August - -	−93	+902	+809	+197	+999	+11,96
September - -	+88	+587	+675	+284	+246	+530
October - -	+117	+597	+714	+455	+356	+811
November - -	+561	−202	+359	+468	+450	+918
December -	+738	−461	+277	+619	+629	+12,48
January - -	+526	−399	+129	+479	+144	+623
February -	+340	−146	+194	+190	+179	+369
March - -	+380	−188	+192	+90	+12	+102
Total - -	+26,91	+15,80	+42,71	+43,51	+52,30	+95,81

(c) Net Imports of Sovereigns and Gold Bullion into India on Private Account.

	Gold Coin (Sovereigns).	Gold Bullion.		Gold Coin (Sovereigns).	Gold Bullion.
	£	£		£	£
1900–1 - -	3,853,000	1,193,000	1910–11 - -	8,160,000	7,829,000
1901–2 - -	3,193,000	93,000	1911–12 - -	18,230,000	6,947,000
1902–3 - -	5,413,000	90,000	1912–13 - -	17,620,000	7,433,000
1903–4 - -	8,467,000	2,420,000	1913–14 - -	7,560,000	7,987,000
1904–5 - -	8,540,000	3,533,000	1914–15 - -	1,100,000	4,533,000
1905–6 - -	2,887,000	3,413,000	1915–16 - -	213,000	3,053,000
1906–7 - -	4,954,000	4,907,000	1916–17 - -	1,180,000	1,620,000
1907–8 - -	6,433,000	5,133,000	1917–18 - -	4,280,000	10,027,000
1908–9 - -	867,000	2,273,000	1918–19 - -	Nil	13,000
1909–10 - -	9,213,000	5,240,000			

(d) Gross Circulation of each Denomination of Currency Note on 31st March, 1914-19.

Date.	Number of Notes for Rupees.										Total.	
	1.	2-8.	5.	10.	20.	50.	100.	500.	1,000.	10,000.	Pieces.	Value.
												Rs.
31st Mar. 1914	—	—	3,222,891	17,726,423	38,415	357,059	1,781,370	52,774	91,712	15,294	23,285,938	66,11,75,935
31st Mar. 1915	—	—	3,139,195	14,986,196	28,774	348,290	1,605,197	47,370	92,037	15,651	20,262,710	61,62,99,615
31st Mar. 1916	—	—	4,493,230	18,803,430	24,842	449,005	2,038,915	46,661	89,875	12,679	25,958,637	67,73,34,540
31st Mar. 1917	—	—	6,624,239	22,598,076	21,659	504,130	2,532,181	48,944	112,420	18,890	32,460,539	86,37,51,735
31st Mar. 1918	3,275,931	716,129	10,897,857	27,331,814	19,581	690,652	3,253,072	49,879	137,993	14,190	46,387,098	99,79,37,599
31st Mar. 1919	105,065,650	7,378,712	18,381,838	46,922,029	17,689	979,508	4,380,532	49,387	151,080	18,685	183,345,110	153,46,47,790

(e) Imports and Exports of Silver to and

IMPORTS.

Date.	Amount in Standard Ounces.			Value in Rupees.		
	Government.	Private.	Total.	Government.	Private.	Total.
	Ozs.	Ozs.	Ozs.	Rs.	Rs.	Rs.
1870–71 -	—	—	—	—	2,66,22,490	2,66,22,490
1871–72 -	—	—	—	—	8,00,00,350	8,00,00,350
1872–73 -	—	—	—	—	1,93,42,140	1,93,42,140
1873–74 -	—	—	—	—	4,14,37,260	4,14,37,260
1874–75 -	—	—	—	—	6,05,18,110	6,05,18,110
1875–76 -	—	—	—	—	3,46,43,410	3,46,43,410
1876–77 -	—	—	—	20	9,99,24,060	9,99,24,080
1877–78 -	—	—	—	—	15,77,65,320	15,77,65,320
1878–79 -	—	—	—	—	5,59,36,990	5,59,36,990
1879–80 -	—	—	—	—	9,60,50,020	9,60,50,020
1880–81 -	—	—	—	—	5,31,61,560	5,31,61,560
1881–82 -	—	—	—	—	6,46,63,890	6,46,63,890
1882–83 -	—	—	—	—	8,35,80,220	8,35,80,220
1883–84 -	—	—	—	—	7,40,85,060	7,40,85,060
1884–85 -	—	—	—	93,500	9,10,06,750	9,11,00,250
1885–86 -	—	—	—	—	12,38,62,600	12,38,62,600
1886–87 -	—	—	—	—	8,21,97,610	8,21,97,610
1887–88	—	—	37,877,141	—	10,58,98,030	10,58,98,030
1888–89 -	—	—	37,844,665	—	10,72,58,720	10,72,58,720
1889–90 -	—	—	43,940,659	2,000	12,38,82,740	12,38,84,740
1890–91 -	—	—	56,190,870	1,50,000	15,41,86,540	15,43,36,540
1891–92 -	—	38,177,580	38,177,580	—	10,60,37,330	10,60,37,330
1892–93 -	—	54,180,144	54,180,144	—	15,22,80,210	15,22,80,210
1893–94 -	135,000	60,193,296	60.328,296	3,60,000	15,27,87,264	15,31,47,264
1894–95 -	83,250	32,554,819	32,638,069	2,22,000	7,80,27,273	7,82,49,273
1895–96 -	33,750	34,049,060	34,082,810	90,000	8,32,97,162	8,33,87,162
1896–97 -	34,540	37,485,782	37,520,322	92,107	8,58,41,738	8,59,33,845
1897–98 -	203,739	68,331,873	68,535,612	5,43,305	13,19,50,644	13,24,93,949
1898–99 -	43,710	49,183,070	49,226,780	1,16,560	9,04,39,025	9,05,55,585
1899–1900 -	53,413	50,610,129	50,663,542	1,42,434	9,51,06,458	9,52,48,892
1900–01 -	41,471,537	23,275,012	64,746,549	8,08,65,168	4,59,22,253	12,67,87,421
1901–02 -	4,886,710	61,840,262	66,726,972	94,30,415	11,35,07,591	12,29,38,006
1902–03 -	464,676	75,104,509	75,569,185	7,74,153	12,10,90,721	12,18,64,874
1903–04 -	37,242,912	67,081,853	104,324,765	6,56,61,509	11,81,20,869	18,37,82,378
1904–05 -	35,656,645	62,462,263	98,118,908	6,48,06,416	11,21,55,553	17,69,61,969
1905–06 -	56,489,510	32,363,569	88,853,079	10,72,37,236	6,17,83,175	16,90,20,411
1906–07 -	84,884,239	40,993,769	125,878,008	17,31,62,254	8,73,02,041	26,04,64,295
1907–08 -	46,070,569	60.287,705	106,358,274	9,44,60,310	12,08,58,260	21,53,18,570
1908–09 -	418,943	84,629,818	85,048,761	11,23,131	14,22,76,236	14,33,99,367
1909–10 -	313,160	75,188,585	75,501,745	8,38,999	12,40,85,517	12,49,24,516
1910–11 -	256,525	69,243,213	69,499,738	6,87,802	11,81,22,794	11,88,10,596
1911–12 -	182,012	70,196,735	70,378,747	4,87,547	11,92,84,876	11,97,72,423
1912–13 -	56,057,978	51,132,449	107,190,427	10,63,37,494	9,90,72,187	20,54,09,681
1913–14 -	35,425,057	44,409,942	79,834,999	6,81,92,047	8,39,40,378	15,21,32,425
1914–15 -	169,342	63,990,786	64,160,128	3,76,739	11,06,68,261	11,10,45,000
1915–16 -	302,259	39,531,020	39,833,279	5,35,317	6,61,10,252	6,66,45,569
1916–17 -	109,522,499	7,436,616	116,959,115	23,55.52,467	1,55,95,527	25,11,47,994
1917–18 -	79,404,555	9,409,903	88,814,458	20,29,09,726	2,37,84,128	22,66,93,854
1918–19 -	237,189,080	4,558,726	241,747,806	67,89,45,047	1,19,47,072	69,08,92,119

Figures for 1870–71 to 1891–92 (value in Rupees) have been taken from Appendix II. to the Evidence before the Indian Currency Committee, 1898 (Command Paper 9376 of 1899).

Figures for years previous to 1887–88 (No. of ounces) are not available (*vide* Financial and Commercial Statistics of British India, 1st issue, 1894).

Figures for 1887–88 to 1891–92 (No. of ounces) have been taken from the Annual Report of the Director of the United States Mint, 1916, page 256.

Figures for 1891–92 to 1916–17 have been taken from the "Monthly Accounts relating to the Sea-borne Trade and Navigation of British India."

Figures for 1916–17 to 1918–19 have been taken from the Confidential "Supplement to the Accounts relating to the Sea-borne Trade and Navigation of British India."

from India from 1870–71 to 1918–19.

EXPORTS.

Date.	Amount in Standard Ounces.			Value in Rupees.		
	Government.	Private.	Total.	Government.	Private.	Total.
	Ozs.	Ozs.	Ozs.	Rs.	Rs.	Rs.
1870–71	—	—	—	63,35,850	1,08,67,270	1,72,03,120
1871–72	—	—	—	5,49,210	1,41,27,390	1,46,76,600
1872–73	—	—	—	2,41,000	1,19,49,700	1,21,90,700
1873–74	—	—	—	3,50,000	1,61,29,020	1,64,79,020
1874–75	—	—	—	3,25,880	1,37,70,200	1,40,96,080
1875–76	—	—	—	8,50,900	1,82,38,960	1,90,89,860
1876–77	—	—	—	8,73,180	2,70,62,180	2,79,35,360
1877–78	—	—	—	5,58,600	1,04,43,380	1,10,01,980
1878–79	—	—	—	8,66,830	1,53,63,220	1,62,30,050
1879–80	—	—	—	10,63,200	1,62,89,390	1,73,52,590
1880–81	—	—	—	3,10,380	1,39,25,440	1,42,35,820
1881–82	—	—	—	23,600	1,08,49,790	1,08,73,390
1882–83	—	—	—	6,12,000	81,65,950	87,77,950
1883–84	—	—	—	2,87,350	97,46,200	1,00,33,550
1884–85	—	—	—	8,33,000	1,78,10,940	1,86,43,940
1885–86	—	—	—	2,04,000	75,92,320	77,96,320
1886–87	—	—	—	3,60,050	1,02,80,180	1,06,40,230
1887–88	—	—	5,994,542	9,06,700	1,27,03,820	1,36,10,520
1888–89	—	—	5,408,636	8,08,500	1,39,83,430	1,47,91,930
1889–90	—	—	5,296,885	6,44,020	1,38,61,960	1,45,05,980
1890–91	—	—	4,661,785	5,12,720	1,20,72,460	1,25,85,180
1891–92	537,975	5,291,167	5,829,142	14,35,000	1,43,80,489	1,58,15,489
1892–93	112,236	8,544,396	8,656,632	2,99,295	2,33,45,222	2,36,44,517
1893–94	282,956	5,716,367	5,999,323	7,54,550	1,51,94,532	1,59,49,082
1894–95	255,206	5,342,841	5,598,047	6,80,550	1,42,76,427	1,49,56,977
1895–96	103,162	6,961,569	7,064,731	2,75,100	1,72,89,837	1,75,64,937
1896–97	43,519	11,547,715	11,591,234	1,16,050	2,72,57,498	2,73,73,548
1897–98	54,291	24,196,704	24,250,995	1,44,780	4,76,14,364	4,77,59,144
1898–99	12,149	26,049,206	26,061,355	32,400	5,07,15,347	5,07,47,747
1899–1900	24,259	31,993,001	32,017,260	63,471	5,94,18,443	5,94,81,914
1900–01	11,025	15,300,360	15,311,385	29,400	3,16,85,700	3,17,15,100
1901–02	18,237	27,703,543	27,721,780	48,786	5,09,60,877	5,10,09,663
1902–03	364,438	31,930,438	32,294,876	9,72,167	5,13,26,185	5,22,98,352
1903–04	1,803,651	23,945,645	25,749,296	48,09,760	4,34,66,954	4,82,76,714
1904–05	167,805	23,601,508	23,769,313	4,47,485	4,38,99,760	4,43,47,245
1905–06	75,833	4,459,481	4,535,314	2,02,479	1,15,87,739	1,17,90,218
1906–07	19,668	7,659,483*	7,679,151	52,450	2,03,56,652	2,04,09,102
1907–08	8,519	8,434,396*	8,442,915	22,720	2,06,13,154	2,06,35,874
1908–09	10,875	11,297,755*	11,308,630	29,000	2,26,85,812	2,27,14,812
1909–10	10,054	14,476,939*	14,486,993	27,100	3,04,48,193	3,04,75,293
1910–11	33,288	14,362,742	14,396,030	89,345	3,20,41,307	3,21,30,652
1911–12	17,951	38,131,696	38,149,647	47,870	6,63,52,894	6,64,00,764
1912–13	32,677	16,080,108	16,112,785	86,808	3,33,35,110	3,34,21,918
1913–14	115,533	8,612,115	8,727,648	3,07,996	2,14,94,774	2,18,02,770
1914–15	4,420,671	3,973,334	8,394,005	1,17,91,125	1,05,39,169	2,23,30,294
1915–16	2,999,799	3,901,107	6,900,906	79,99,500	1,03,50,311	1,83,49,811
1916–17	5,381,933	19,383,376	24,765,309	1,43,48,479	4,87,98,384	6,31,46,863
1917–18	7,253,824	7,029,136	14,282,960	1,93,43,440	1,69,32,350	3,62,75,790
1918–19	3,486,672	1,232,515	4,719,187	99,26,413	17,75,815	1,17,02,228

Figures for 1870–71 to 1891–92 (value in Rupees) have been taken from Appendix II. to the Evidence before the Indian Currency Committee, 1898 (Command Paper 9376 of 1899).

Figures for years previous to 1887–88 (No. of ounces) are not available (*vide* Financial and Commercial Statistics of British India, 1st issue, 1894).

Figures for 1887–88 to 1891–92 (No. of ounces) have been taken from the Annual Report of the Director of the United States Mint, 1916, page 256.

Figures for 1891–92 to 1916–17 have been taken from the "Monthly Accounts relating to the Sea-borne Trade and Navigation of British India."

Figures for 1916–17 to 1918–19 have been taken from the Confidential "Supplement to the Accounts relating to the Sea-borne Trade and Navigation of British India."

* Figures defective, the weight of certain Postal Parcels not being declared by the Post Office.

(f) Trade of India, with certain countries, Import and Export, for the Years 1913-14 and 1918-19 in thousands of Rupees.

(See Question No. 5291 in Volume of Evidence.)

Country.	Imports.		Exports.		Total Trade.	
	1913-14.	1918-19.	1913-14.	1918-19.	1913-14	1918-19.
(*a*) United States of America.	4,79,04	16,14,86	21,77,83	33,06,77	26,56,87	49,21,63
(*b*) Japan - - - -	4,78,02	33,52,28	22,67,38	29,14,32	27,45,40	62,66,60
(*c*) United Kingdom - -	17,58,22	76,99,62	57,35,52	69,94,70	174.93,74	146,94,32
Gibraltar - - -	0,67	*	1,28	4,45	1,95	4,45
Aden and Dependencies	43,77	89,19	1,22,35	1,76,76	1,66,12	2,65,95
Egypt - - - -	30,07	1,63,60	2,19,04	14,74,79	2,49,11	16,38,39
Cape Colony - -	0,03	*	36,59	1,05,89	36,62	1,05,89
Natal - - - -	22,26	*	80,27	2,24,88	1,02,53	2,24,88
Canada - - -	0,89	5,13	1,42,80	2,41,70	1,43,69	2,46,83
British West Indies -	0,03	*	0	40,63	0,03	40,63
Australia (including New Zealand).	91,68	†2,16,98	4,65,16	7,28,39	5,56,84	9,45,37
Sweden - - -	51,56	51,43	42,25	14,13	93,81	65,56
Norway - - -	23,21	90,24	5,01	31,47	28,22	1,21,71
Holland - - -	1,55,31	25,35	4,41,27	9,28	5,96,58	34,63
Belgium - - -	4,25,78	0,63	12,06,48	1,08	16,32,26	1,71
France - - -	2,69,16	1,84,65	17,68,27	8,86,82	20,37,43	10,71,47
Spain - - - -	18,80	30,88	2,22,81	57,63	2,41,61	88,51
Switzerland - - -	68,68	45,87	0	15,25	68,68	61,12
Italy - - - -	2,19,54	91,72	7,83,51	9,53,11	10,03,05	10,44,83
Austria-Hungary -	4,29,04	0	9,97,48	14,79	14,26,52	14,79
Sumatra - - -	1,91	5,74	18,90	34,61	20,81	40,35
Borneo and Java - -	11,64,20	11,56,97	‡1,93,46	3,46,95	13.57,66	15,03,92
Siam - - - -	27,80	35,39	93,29	1,07,27	1,21,09	1,42,66
West Indies - -	0	*	84,24	1,85,05	84,24	1,85,05
South America - -	0,12	*	4,76,80	6,84,91	4,76,92	6,84,91
Oceania - - -	0	*	33,06	42,85	33,06	42,85
Total of (*c*) - -	148,02,73	98,93,39	131,69,84	133,77,39	279,72,57	232,70,78

* Figures not available.

† Excludes New Zealand, for which figures are not available.

‡ Includes British Borneo.

APPENDIX XXXII.

(a) Questions addressed to Mr. F. I. Kent, of the Federal Reserve Board, U.S.A.

1. Does the Federal Reserve Act aim ultimately at making Federal Reserve Bank notes the only form of paper currency in circulation in the United States of America? If not, what other notes would be in circulation, and what would be the backing, metallic or otherwise, for these notes?

2. What are the conditions under which Federal Reserve Banks can obtain Federal Reserve notes—

(*a*) as regards the deposit of collateral security?

(*b*) as regards the maintenance of metallic reserves?

Must the collateral security consist exclusively of notes and bills accepted for re-discount under section 13 of the Federal Reserve Act, and is there any limitation of the amount of Federal Reserve notes that may be issued against such security? What happens if the prescribed metallic reserve is not maintained?

3. What restrictions and definitions exist as regards the class of bill that may be accepted for re-discount by Federal Reserve Banks, and consequently used as collateral security for the issue of notes?

Has the Federal Reserve Board made any regulations under section 13 of the Federal Reserve Act for the purpose of determining and defining the character of the paper eligible for discount or in execution of the last paragraph of that section?

When bills are deposited as security for Federal Reserve notes, how is it ascertained that they comply with the prescribed conditions?

4. What is the distinction between "Bills of Exchange" and "Acceptances" (section 13, paragraph 3)? Must such bills be payable on maturity in the United States of America? Must they be expressed in dollars?

5. Must all bills accepted by a Federal Reserve Bank be endorsed by the member bank presenting them for re-discount? Is there any limit to the amount of bills which may be accepted bearing the endorsement of one bank? Is a Federal Reserve Bank required to endorse the bills which it deposits as collateral security for Federal Reserve notes?

6. How are bills deposited as security for notes dealt with at maturity? Are they ever collected by the Federal Reserve agent, or are they always withdrawn before maturity under the clause of section 16, which permits the substitution of collateral? Are any special arrangements made for dealing with bills of exchange payable elsewhere than in the United States? What arrangements are made with reference to documentary bills?

7. In practice, have the bills deposited as collateral security for notes been internal trade bills or bills based upon the export of merchandise?

8. What provision does the system make for the contraction of the currency, if circumstances require it?

(b) Replies received from Mr. F. I. Kent.

1. The Federal Reserve Act was drawn up with the intention of enabling the retirement of the circulation of the National Banks of America. Such circulation in the United States, September 30, 1919, was $721,485,210, which, if I recall it correctly, shows a reduction of from one to two hundred million dollars in such issues since the Federal Reserve Act went into force.

It was also hoped by some that ultimately the Federal Reserve notes might replace the United States notes outstanding, which total $346,681,016, and against which the United States Treasury held on April 30, 1919, gold to the amount of $152,979,025.

In addition to these notes there are two forms of currency in circulation in the United States that are in the nature of warehouse receipts—one, gold certificates, of which there are at present outstanding $740,028,984, and silver certificates, $330,701,417. It was the custom for National bankers before the organisation of the Federal Reserve system to deposit their gold coin with the nearest Assistant Treasurer of the United States to their offices, and take in exchange for it gold certificates of deposit, often issued to the order of the bank making the deposit, in amounts of $10,000. These certificates were then held as reserve by the banks, which was considered safer, and at the same time took up much less vault space. Such notes made most effective reserve, as they could be turned into gold immediately. Now that the Federal Reserve Banks carry the reserves of National Banks, this use of the gold certificates is not as general.

Silver certificates represent silver dollars held by the Treasurer of the United States. Up to the time that the United States entered the war, these certificates were issued in small denominations, and constituted the bulk of the circulation which was used by the people for small change, as the certificates were issued in $1 and $2 and larger denominations. Since the Pittman Act, under which India received $200,000,000 in silver from the Treasury of the United States against silver certificates which were redeemed in order to free the silver, $1 and $2 silver certificates which were cancelled have been replaced with Federal Reserve Bank notes as distinguished from Federal Reserve notes. The outstanding silver certificates have been reduced by the amount of silver taken from the United States Treasury. This silver, however, under the Pittman Act must be replaced whenever silver may be offered to the United States Treasury on the basis of $1 per fine ounce.

The money in circulation in the United States, October 1, 1918, and September 1, 1919, is as follows:—

	Sept. 1, 1919.	Oct. 1, 1918.
	$	$
Gold coin (including bullion in Treasury)	1,047,846,479	962,748,000
Gold certificates	429,053,501	740,028,984
Standard silver dollars	81,784,880	81,362,794
Silver certificates	159,090,586	330,701,417
Subsidiary silver	235,602,778	226,412,045
Treasury notes of 1890	1,718,304	1,831,358
United States notes	328,737,411	338,409,612
Federal Reserve notes	2,668,430,760	2,365,006,124
Federal Reserve Bank notes	201,670,005	42,573,955
National Bank notes	652,637,176	700,943,285
Total	5,806,571,880	5,790,017,574

2.—(*a*) The Federal Reserve Banks obtain Federal Reserve notes from the Federal Reserve Agent in each Federal Reserve Bank by the delivery to said Agent of gold and eligible security. The Federal Reserve Agent holds such gold and notes jointly for account of the Government and the Federal Reserve Bank. The Federal Reserve Agent under regulations of the Federal Reserve Board, must hold all collateral against notes issued in joint custody of himself and the Federal Reserve Bank to which he is accredited. The Federal Reserve Agent for each district has his office in the Federal Reserve Bank of the district. When a Federal Reserve Bank desires Federal Reserve notes, application is made to the Federal Reserve Agent, and at the same time gold or approved collateral is delivered to the Federal Reserve Agent.

(*b*) Under the law the Federal Reserve Banks, unless prevented by the Federal Reserve Board for some special reason, can issue Federal Reserve notes against 100 per cent. gold, or against gold and collateral to 100 per cent. in such proportion that the gold shall equal 40 per cent. of the outstanding Federal Reserve notes. Of this 40 per cent., not less than 5 per cent. of the total, less the amount of gold held by the Federal Reserve Agent as collateral, shall be with the United States Treasury. Any gold which may be on deposit with the Treasurer of the United States for the redemption of notes can be considered as collateral security held by the Federal Reserve Agent. The collateral security, other than gold, must consist exclusively of notes and bills acceptable for rediscount, as stated under section 13 of the Federal Reserve Act, except that in an amendment to the Federal Reserve Act approved March 3, 1915, "Any Federal Reserve Bank may discount acceptances which are based on the importation or exportation of goods, and which have a maturity at the time of discount of not more than three months, and endorsed by at least one member bank."

The Federal Reserve Banks have authority, unless the Federal Reserve Board rejects their applications for notes, to issue them under the conditions provided by the National Bank Act, except that the issue is not limited by their capital, as is true in the case of National Banks. The restriction as to total is covered through the requirement that a 40 per cent. gold reserve be maintained. In case after the issuance of Federal Reserve notes the reserve of a Federal Reserve Bank falls below the prescribed 40 per cent., the Federal Reserve Board must establish a graduated tax of not more than 1 per cent. upon any such deficiency until the reserves fall to 32½ per cent. Should they fall below this figure, a tax of 1½ per cent. per annum must be paid upon each 2½ per cent. or fraction that the reserves fall below 32½ per cent.

3. Federal Reserve Banks may discount commercial notes, drafts and bills of exchange endorsed by member banks, provided such paper does not run for more than 90 days, exclusive of days of grace, unless it is agricultural and cattle paper, in which case the Federal Reserve Board can authorise the discount of such paper having not to exceed six months to run exclusive of days of grace. The Federal Reserve Banks may also discount acceptances bearing the endorsement of one member bank based on exportation or importation of goods or domestic shipments accompanied by documents showing title or warehouse receipts, provided such acceptances mature not longer than three months after sight, exclusive of days of grace.

An amendment to the Act approved March 3, 1919, authorised the Federal Reserve Board, on an affirmative vote of five members, to discount for member banks until December 31, 1920, notes, drafts or bills of exchange of any one borrower in excess of 10 per cent. of its capital and surplus, but not to exceed 20 per cent. of member bank's capital and surplus, provided the excess of the 10 per cent. authorised in this amendment over the original provision shall be secured by not less than a like amount of United States bonds or notes issued since April 24, 1917, or United States Certificates of Indebtedness. This amendment was passed in order to place Federal Reserve Banks in position to make loans to member banks, who in turn had loaned their customers the full 10 per cent. allowed by law, and who were then called upon by such customers for further loans against Liberty Bonds.

The Federal Reserve Board also authorised Federal Reserve Banks, subject to review by it, to discount for member banks their promissory notes secured by United States bonds or notes, drafts, bills of exchange or bankers' acceptances eligible for re-discount or purchase by Federal Reserve Banks having not to exceed 15 days to run. This provision has been largely made use of by member banks as a means of bringing up their reserves in time of need by issuing promissory notes against paper which they had that was about to mature. This method of procedure saved the necessity of selling or discounting long-time paper when the extra reserve needed might be only a matter of a few days.

The Federal Reserve Banks in each district, under regulations which have been issued from time to time by the Board, require statements from member banks.

Collateral, when offered, is checked up carefully by each Federal Reserve Bank before acceptance to see that it conforms with the legal requirements. In actual practice the vast bulk of such paper can be quickly passed, and in case of doubt the bank asking for the re-discount is obliged to satisfy the Federal Reserve Bank management as to the eligibility of the paper offered, or replace it with other paper.

4. While acceptances are technically bills of exchange, yet in view of the fact that the power to accept time drafts drawn upon them was only extended to National Banks through the Federal Reserve Act, acceptances were treated under a special paragraph to make clear beyond any question that the new paper created under the Act was eligible for

rediscount, and was not excluded because it did not exist before the Federal Reserve system went into effect. In the United States it has been and is customary for bills of exchange to be issued which are not in acceptance form, that is, sight or three days' date, or 60 or 90 days' date, or where the acceptance is given by a purchaser of goods on a draft drawn by the seller, that is, the ordinary trade acceptance.

It is my recollection that paper drawn in other currencies than dollars, and payable outside of the United States, has been accepted as collateral, but as I have not the regulations of the Federal Reserve Board in front of me, I have no means of checking it up This detail is all handled by the officers in each Federal Reserve Bank who deal directly with member banks and pass upon the collateral offered.

5. All bills accepted by a Federal Reserve Bank must be endorsed by the member bank presenting them for re-discount.

Bills cannot be discounted for a member bank where the aggregate bearing the same signature and endorsement re-discounted for any one bank at any one time exceeds 10 per cent. of the unimpaired capital and surplus of such bank. This restriction does not apply, however, to the discount of bills of exchange drawn in good faith against actually existing values. It is my understanding that the Federal Reserve Banks and/or the Federal Reserve Board can refuse to discount paper for any member bank, if, in their judgment, discounts in excess of a reasonable amount for such institution are requested.

In connection with the open market operations of the Federal Reserve Bank, it is not necessary that the endorsement of a member bank be obtained.

It is my understanding that the Federal Reserve Bank does not endorse bills which it deposits as collateral security for Federal Reserve notes, but that it is effectively and technically behind the collateral nevertheless.

6. Formerly it was customary for member banks to withdraw collateral before maturity and substitute new collateral, and arrange for the collection of maturing paper themselves. Since the collection system of the Federal Reserve Banks has been in force it is very probable that many banks after substituting other collateral, provided it is their desire to continue loans, collect certain of the items through the Federal Reserve Bank, but even this in effect would represent a substitution, as it is an entirely different department of the Federal Reserve Bank that handles collections. It might, therefore, be properly considered that substitution was effected in every case.

The Federal Reserve Banks have not yet undertaken to operate under their authority to do a foreign exchange business, in so far as it applies to the collection of foreign items in any general or large way.

7. In practice bills deposited as collateral security for notes have largely been internal bills, and their character is determined in the case of each Federal Reserve Bank by the nature of the business of their member banks. For instance, in August 1919 the Federal Reserve Banks of Dallas, San Francisco, Chicago, Atalanta and Richmond held agricultural paper amounting respectively to $9,500,000, $6,000,000, $4,500,000, $3,800,000, and $3,000,000, whereas none of the other Federal Reserve Banks carried much of this paper. The Kansas City bank held $16,000,000 in live-stock paper; the Dallas bank $4,700,000, the San Francisco bank about $3,000,000, the Minneapolis bank $2,500,000, and none of the other banks any to speak of. The New York bank held $3,000,000 in trade acceptances, the Cleveland bank $1,400,000, and the Kansas City bank $1,000,000. The Boston bank had $200,000 in bankers' acceptances, and the New York bank $148,000; the St. Louis bank $71,000, and the Cleveland bank $19,000, and none of the other banks held any such paper as collateral to discounts. Out of a total of $1,815,134,000 in discounts, $1,609,296,000 represented customers' paper secured by Government war obligations or members banks' collateral notes secured by Government war obligations. The balance of the security held as collateral to discounts was of miscellaneous classes covered by the regulations as to eligibility, and undoubtedly represented ordinary trade paper created to finance sales of commodities. At the same time the combined Federal Reserve Banks held $365,373,000 in bankers' acceptances, and $561,000 domestic trade acceptances and $1,229,000 foreign trade acceptances. The big bulk of the business of the Federal Reserve Banks which has to do with foreign trade is clearly covered by the *purchase* of acceptances which are drawn outside of the United States upon American banks and accepted by them.

8. The provision for the contraction of the currency is covered in the regulation already given, under which an increased tax is assessed by the Federal Reserve Board whenever the reserve of the Federal Reserve Banks falls below 40 per cent. of their circulation. It is also necessary for the Federal Reserve Banks to maintain a 35 per cent. reserve against deposits, as such domestic deposits as they carry represent, aside from United States Government deposits, the reserves of member banks. When it is desirable to call in circulation, the Federal Reserve Banks can raise their discount rates. This has a tendency to reduce loans, with the resultant contraction in the outstanding circulation, as any large reduction of loans would unquestionably develop through charges to the accounts of member banks on the books of the Federal Reserve Banks, which accounts were made good by deposit of currency, which would largely be Federal Reserve notes.

No Federal Reserve Bank is authorised to pay out under penalty of 10 per cent. of the face of the notes Federal Reserve notes issued by any other Federal Reserve Bank. Further, any notes presented for redemption at the United States Treasury must be returned to the Federal Reserve Bank which issued them. These two provisions necessitate a constant return of Federal Reserve notes to the Federal Reserve Banks issuing them, which places them in position to cancel the notes if conditions warrant.

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